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Ontario

Ministry of
Natural
Resources

Hon. Alan W. Pope
Minister

W.T. Foster
Deputy Minister

ONTARIO GEOLOGICAL SURVEY
Open File Report 5371

Uranium and Thorium Deposits of Northern Ontario.

by

J.A. Robertson and K.L. Gould

1982

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E.G. Pye, Director
Ontario Geological Survey

FOREWORD

This circular briefly summarizes data on some four hundred uranium and/or thorium deposits of Northern Ontario and supercedes Mineral Resources Circular No.9, published in 1968. It is a part of a group of publications providing an up-to-date data base on Ontario's uranium deposits; their classification, distribution, resources and factors affecting their development or further resources.

The most significant of the deposits describedare fossil placers lying at or near the base of the Early Proterozoic Huronian Supergroup, including the producing and past-producing mines in the Elliot Lake-Agnew Lake area.

Should a market for thorium develop, the Elliot Lake uranium deposits would constitute a major source.

E.G. Pye
Director
Ontario Geological Survey

January 1982

TABLE OF CONTENTS

Abstract 1

Introduction

- Acknowledgements
- Explanation of This Circular

Description of Deposits

- District of Algoma
  - Aberdeen Township
    - Rio Tinto Canadian Exploration Limited Prospect 10
  - Albanel Township
    - Little White River Occurrence 12
  - Beange Township
    - Candore Explorations Limited Prospect
    - Consolidated Callinan Flin Flon Mines Limited Occurrence
    - Quirke Group West Occurrence
    - Span-North Mining Claims Limited Occurrence
  - Bolger Township
    - Gui-Por Uranium Mines Limited Prospect
    - Moon Lake Mines Limited Occurrence
    - Nordic Group West Prospect
  - Bouck Township
    - Benner, R.Occurrence
    - Denison Mine (Main Mine)
    - Gemico, A.G. Prospect
    - Kerr-McGee Corporation 150-151 Occurrence
    - Quirke Mine No.1
    - Quirke Mine No.2
    - Spanish American Mine
  - Buckles Township
    - Can-Met Mine 40
    - Conecho Mines Limited Prospect 42
    - Panel Mine 44
    - Roche Long Lac Mines Limited Prospect 47
    - Roman Island Occurrence
    - Stanrock Mine

Day Township

Cullis Lake Occurrence 54

Gaiashk Township

Corner Lake Occurrence [illegible]
Iso Mines Limited Occurrence [illegible]
Pecors Lake Prospect ([illegible]) [illegible]
Whiskey Prospect [illegible]

Giles Township

Soo-Tomic Uranium Mines Limited Occurrence [illegible]

Greenwood Township

Phillips, R.B. Occurrence [illegible]

Gunterman Township

Buckles Mine [illegible]
Crotch Lake Occurrence [illegible]
Genex Mines Limited Prospect [illegible]
Kamis Uranium Mines Limited Occurrence [illegible]
Lacnor Mine [illegible]
Milliken Mine [illegible]
Nordic Mine [illegible]
Silvermaque Mining Limited Occurrence [illegible]
Stanleigh Mine [illegible]

Jollineau Township

Gardiner, M.C. Occurrence [illegible]

Joubin Township

Abeta Mining Corporation Occurrence [illegible]
Millacqua Mines Limited Prospect [illegible]
Nasco Cobalt Silver Mines Limited Occurrence [illegible]
Pardee Amalgamated Mines Limited Prospect [illegible]
Pecors Lake West Prospect [illegible]
Stancan Uranium Mines Limited Occurrence [illegible]
St. Mary's Uranium Mines Limited Occurrence [illegible]
Vite Uranium Mines Limited Occurrence [illegible]

Kamichisitit Township

Kee #2 Occurrence [illegible]

Kincaid Township

Hathaway Metal Mines Limited Occurrence [illegible]

Kirkwood Township

Abconore Uranium Mines Limited Occurrence [illegible]

Labelle Township

Franz, J.N. Occurrence [illegible]
The Ottawa Associates Occurrence [illegible]

Labonte Township

McCombe Mining Syndicate Occurrence [illegible]
Napray Mining Corporation Limited Occurrence [illegible]

Larson Township

McDonough, E.P. Occurrence [illegible]

Long Township

Location X Occurrence [illegible]
Pronto Mine [illegible]

McAughey Township

Gimby, J.E. Occurrence [illegible]

Morin Township

McIntyre Porcupine Mines Limited Occurrence [illegible]

Nicholas Township

Crazy Lake Occurrence [illegible]

Peever Township

Damascus Mines Limited Occurrence [illegible]
Dolan, J.P. Occurrence [illegible]
Hennessey Uranium Explorations Incorporated Occurrence [illegible]
McCombe, J.G. Occurrence [illegible]
Patrick Uranium Mines Limited Occurrence
Ranwick Uranium Mines Limited Prospect 121
Van Lake Prospecting Syndicate Occurrence 122

Piche Township

Consolidated Golden Arrow Mining Limited Occurrence [illegible]
Inspiration Mining and Development Limited Occurrence 125

Poulin Township

Cobalt Consolidated Mining Corporation Occurrence 126

Reilly Township

Ranger Lake Occurrence [illegible]

Rix Township

Canagau Mines Limited Occurrence [illegible]

Roots Township

Aubrey Falls Occurrence [illegible]

Sagard Township

Caneonti Mines Limited Prospect 132
Grey Trout-Blue Sky Lake Prospect 134
Harvard Uranium Mines Limited Prospect 136

Shedden Township

Denvic Lake Occurrence 137

Slater Township

Batchewana Uranium Mines Limited Occurrence [illegible]
Bobcam Mines Limited Occurrence 141
Camray Mines Limited 142
Camray Mines Limited (Theano Point) Prospect 142
Mosher, A.C. and Byles, G. Occurrence 145
Robb-Murmac Uranium Mines Limited Prospect [illegible]
Soo-Tomic Uranium Mines Limited Occurrence [illegible]

Smilsky Township

  Fausten Exploration Limited Occurrence [illegible]
  Jay-Dee Enterprises Incorporated Occurrence [illegible]
  Labine-McCarthy Uranium Mines Limited Occurrence [illegible]

Spragge Township

  Spragge Creek Occurrence 158

Timmermans Township

  Anabar Mining and Development Company Minited Occurrence 159
  Big Game Mines Limited Occurrence [illegible]
  Buffana Uranium Mines Limited Prospect [illegible]
  Coffee Lake Occurrence [illegible]
  Denison Mines Limited Occurrence [illegible]
  Dominion Uranium Corporation Prospect [illegible]
  Jeanette Minerals Limited Prospect [illegible]
  Martin, D.R. [illegible]
  Moon Lake Mines Limited [illegible]
  Patrick Uranium Mines Limited Occurrence [illegible]
  Pistol Lake Prospect [illegible]
  Zenmac Metal Mines Limited Occurrence 170

Tupper Township

  Pitchore Uranium Mines Limited Prospect 171

Vankoughnet Township

  Vankuoghnet Township Occurrence [illegible]

Viel Township

  Gaitwin Explorations Limited Occurence [illegible]
  Mattaini C. and B. Occuurence [illegible]
  Rawhide Uranium Mines Limited Occurrence [illegible]

District of Algoma Miscellaneous Occurrences

Albanel Township

  Arco Triller No.2 [illegible]

Bolger Township

  Peerless Uranium Mining Corporation Limited 178

Day Township

Sowerby [illegible]

Duncan Township

Duncan Township [illegible]
Maud Lake [illegible]

Gaiashk Township

Canuc Mines Limited [illegible]

Gaudette Township

Alur Mines Limited [illegible]

Gunterman Township

International Mining and Development Limited [illegible]
Thorncrest Explorations Limited [illegible]

Jarvis Township

Reserve Lake [illegible]

Johnson Township

Desbarats Mining Company Limited [illegible]

Juillette Township

Fano Uranium Mines Limited [illegible]
Matinenda Uranium Mines Limited [illegible]

Kamichisitit Township

Blind River 190

Kirkwood Township

Kirkwood Township 191

Labonte Township

Huclif Porcuoine Mines Limited [illegible]
Jalore Mining Company Limited [illegible]
Lapska Mines Limited [illegible]
McDevitt, D.L. [illegible]
Tooker, E.O. [illegible]

Lecaron Township

Kirkpatrick Lake 197

Lefroy Township

Frye, H.E. 198
Webb 199

Lehman Township

Bracemar Mines Limited 200

Mack Township

Black Lake 201

Maeck Township

Seabrook Lake 202

McMurray Township

Firesand River 203
Surluga, T. 204

Monestine Township

Russian Lake 205

Montgomery Township

Demorest Lake 206

Morin Township

Sutherland , W.D. 207

Raimbault Township

Boymar Gold Mines Limited 208
God's Lake Mining Syndicate 209
Zenmac Metal Mines Limited 210

Rix Township

Falconbridge Nickel Mines Limited 211
Roche, F.D. 212

Rollins Township

James, E.B. 213

Sagard Township

Mount Lake Area 214

Salter Township

Shunck, R. 215

Slater Township

Manwood Mining Corporation Limited 216
Pennwood Gold Mines Limited 217

Smilsky Township

Ranrouyn Mines Limited 218

Strain Township

Madawanson Lake 219

Striker Township

Cyr 220

Tarbutt Township

Tarbutt Mines Limited 221

Thessalon Township

West Thessalon 222

Timmermans Township

Anuwon Uranium Mines Limited 223
Fano Uranium Mines Limited 224
Fort Norman Explorations Incorporated 225

Viel Township

Weston, D. 226

Whitman Township

Crestland Mines Limited [illegible]

District of Cochrane

Habel Township

Soweska (miscellaneous) [illegible]

Pitt Township

Calmor Mines Limited Occurrence 229
Coral Rapids (miscellaneous) 231

Shakleton Township

Provencher, M.A. (miscellaneous) [illegible]

District of Kenora

Aerobus Lake Occurrence [illegible]
Bamaji Lake Occurrence [illegible]
Bearhead Lake Prospect [illegible]
Cameron, M. and Alcock, C. Occurrence [illegible]
Can-Fer Mines Limited Occurrence [illegible]
Davidson Lake Occurrence [illegible]
Halladay, L.B. Occurrence [illegible]
Headvue Mines Limited Occurrence [illegible]
Jenson, M. Occurrence [illegible]
Pancer Occurrence [illegible]
Perch Lake Occurrence [illegible]
Pirson, J.D. Occurrence [illegible]
Pine Road Occurrence [illegible]
Schryburt Lake Occurrence [illegible]
Snook Lake Occurrence [illegible]
Tourist Lake Prospect [illegible]
Treelined Lake Occurrence [illegible]
Vermilion Lake Occurrence [illegible]
Wolf Island Occurrence [illegible]

Bridges Township

Coulee Lead and Zinc Mines Limited Occurrence [illegible]
Fairservice, R. Occurrence [illegible]
Headway Red Lake Gold Mines Limited Occurrence [illegible]

Docker Township

Kimber Lake East Occurrence [illegible]

Drope and Briethaupt Townships

Bluett Lake [illegible]

Langton Township

Loudon Prospect [illegible]
Preston East Dome Mines Limited [illegible]

MacNicol Township

Foot Lake Occurrence [illegible]
Hawk Lake Occurrence [illegible]
Kenoratomic Mines Limited Occurrence [illegible]
Richard Lake Prospect [illegible]

Temple Township

Bottle Bay Occurrence [illegible]

Tustin Township

Ascot Metals Corporation Limited Occurrence [illegible]
Peturrson Lake Occurrence [illegible]

Wabigoon Township

Benchmark Occurrence [illegible]

District of Kenora Miscellaneous Occurrences

Belair Lake
Chase Lake
Coal Creek [illegible]
Hornby Lake [illegible]
Huston Lake
Johnson Lake [illegible]
Oak Lake
Octopus Lake [illegible]
Paddington Lake [illegible]
Paterson Lake [illegible]
Pineneedle Lake [illegible]
Reynar Lake [illegible]
Sydney Lake [illegible]

Bridges Township

Parth, L.
Wilson, A.L.

McMaster Township

Asarco Company of Canada Limited-Splatter Mountain
-Eagle Mountain

MacNicol Township

Viceroy Uranium Corporation

Tustin Township

Bee Lake

Wabigoon Township

Quibell

District of Nipissing

Pardo Township

Pickle Crow Mines Limited Occurrence

Strathcona Township

Neil, J.P. (miscellaneous)

Vogt Township

Prosco Limited Prospect

District of Rainy River

Heward Lake (miscellaneous)
Mainville Lake Occurrence

District of Sudbury

Baldwin Township

Broulan Reef Mines Limited Central Occurrence [illegible]
Broulan Reef Mines Limited Lookout Tower Occurrence [illegible]
Canadian Johs-Manville Company Limited Occurrence [illegible]
Jellicoe Mines Limited Espanola Bay Area Occurrence [illegible]
Jellicoe Mines Limited Occurrence [illegible]
Plum Uranium and Metal Mines Limited Occurrence [illegible]

Creelman Township

Leslie, L. Occurrence 17

Drury Township

Alanen, W. and Maki, E. Occurrence [illegible]
Kerr Addison Mines Limited Prospect [illegible]

Ermatinger Township

Balboa Uranium Mines Limited Occurrence [illegible]

Grigg Township

Canadian Johns-Manville Company Limited Occurrence [illegible]

Hallam Township

Aggressive Mining Company Limited Occurrence [illegible]

Hutton Township

Assembly Mines Limited Occurrence [illegible]
Assembly Mines Limited Occurrence 1A [illegible]

Hyman Township

Noranda Mines Limited Occurrence [illegible]
Agnew Lake Mines Limited Occurrence [illegible]
East Bay Gold Mines Limited Occurrence [illegible]

Maclennan Township

Picton Mines Limited [illegible]

May Township

Dominion Gulf Company Limited Occurrence F-11

Parkin Township

Assembly Mines Limited 17A Occurrence [illegible]

Porter Township

Brewis and White Company Occurrence [illegible]
Chemical Research Corporation (Canada) Limited Occurrence [illegible]
Hunter Lake Occurrence [illegible]
New Mylamaque Exploratons Limited Occurrence [illegible]

Roberts Township

Nordic Resources Limited Prospect [illegible]
Roberts Lake Occurrence

Shakespeare Township

Alexander, A. Occurrence [illegible]
Broulan Reef Mines Limited Sutherland Creek Occurrence [illegible]
Dominion Gulf Company Limited Occurrence
McDonald Bay Occurrence [illegible]

Stetham Township

Jonsmith Mines Limited Occurrence [illegible]

Stobie Township

Stobie Township Occurrence

Turner Township

Harrison Minerals Occurrence [illegible]

District of Sudbury Miscellaneous Occurrences

Baldwin Township

Dominion Gulf Company Limited [illegible]
United Cobalt Mines Limited [illegible]

Bigwood Township

French River 773

Cassidy Township

Aubinadong River 774

Clary Township

Noranda Mines Limited [illegible]

Collins and Chewitt Townships

Nemegosenda Lake [illegible]

Creelman Township

North Creelman [illegible]

Curtin Township

Bridges, J.R. [illegible]

Demorest Township

Noranda Mines Limited [illegible]

Drury Township

Alford Explorations Limited [illegible]

Fraleck Township

Ingamar Explorations Limited 781

Gallagher Township

Borden Lake 782

Harrow Township

Gutcher, J. 783
Stencill, V. 784

Hyman Township

  Richore Gold Mines Limited [illegible]

Langois Township

  Kram, K. and Glowaski, J. [illegible]

Maclennan Township

  Chevrette, E. [illegible]
  Massey Bay [illegible]

Marconi Township

  Canadian Johns-Manville Company Limited [illegible]
  Can-Fer Mines Limited [illegible]

McNish Township

  Saville, T. [illegible]

Moncrieff Township

  Hollinger Mines Limited [illegible]

Nairn Township

  Deauville Exploration Limited [illegible]

Porter Township

  MacFie Explorations Limited [illegible]
  Pennebec Mining Corporation [illegible]
  Wadge Mines Limited

Seagram Township

  Denison Mines Limited [illegible]

Shakespeare Township

  Blue, P.G. [illegible]
  Delcan Minerals Limited [illegible]
  Pick Uranium Mines Limited [illegible]
  Satellite Metal Mines Limited [illegible]
  Schlesinger, H. [illegible]

Stetham Township

Astrabrun Mines Limited [illegible]

Turner Township

Denison Mines Limited 404
Noranda Mines Limited 405

Victoria Township

Sugar Lake 406
Towle, G. and Humpage, J. 407

District of Thunder Bay

Distict

Greenwich Lake Occurrence [illegible]
New Insco Mines Limited Prospect [illegible]
New Santiago Mines Limited Occurrence [illegible]
Sandy Stone Exploration and Development Company Charron Lake Group [illegible]
Sandy Stone Exploration and Development Company Kassigimini Lake Group [illegible]

Daley Township

Longlac Occurrence [illegible]

Dorion Township

Innes Lake Occurrence 413

District of Thunder Bay Miscellaneous Occurrences

District

Celloti [illegible]
Pic Bamoos Prospecting Syndicate [illegible]
Squaw Lake [illegible]
Univex Exploration and Development Company Limited [illegible]
Yzerdraat, W. [illegible]

Bomby Township

  Hemlo 424

Conmee Township

  Kakabeka Falls [illegible]

Dorion Township

  Dorion Amethyst Mine [illegible]

Goldie Township

  Nelson, Eirc [illegible]

Hele Township

  Tessier, J. and Williamson, E. [illegible]

Laberge Township

  Molson Lake [illegible]
  Punkari, A. [illegible]

McCoy Township

  Port Monroe [illegible]

McIntyre Township

  Port Arthur [illegible]

McTavish Township

  Enterprise Mine 422
  Pearl Lake 424

O'Neil Township

  Cramette, C. 425

Pic Township

  Smith, D.E. 426

Walsh Township

  Deadhorse Creek [illegible]
  McKellar Creek [illegible]

District of Timiskaming

Lebel Township

  Kaplan, M. [illegible]

District of Timiskaming Miscellaneous Occurrences

Cane Township

  Cane Township [illegible]

Coleman Township

  Kerr Lake Mine [illegible]

Boston Township

  Empire Gold Mines Limited [illegible]
  Lunge, M. [illegible]
  Yost [illegible]

Bucke Township

  Harrison-Hibbert Ruby Mines 446

Gilles Limit

  Silvermaque Mine [illegible]

Hudson Township

  Spencer, W. [illegible]

Lebel Township

  Bidgood Kirkland Mine [illegible]
  Hurd, D. [illegible]
  Lebel Township [illegible]

Tudhope Township
Sauve and Inch 452
Index 453

Figures

1. Ontario districts and boundaries 4a
2. Geology of Ontario with principal uranium deposit types 4b

Tables

1. Classification of deposit types 4c
2. Production data for the Blind River Elliot Lake-Agnew Lake area 4d

URANIUM AND THORIUM DEPOSITS

OF

NORTHERN ONTARIO

by

JAMES A. ROBERTSON AND KERRY GOULD

URANIUM AND THORIUM DEPOSITS OF NORTHERN ONTARIO

By

James A. Robertson and Kerry L. Gould[1]

ABSTRACT

This, the second edition of the Uranium Thorium Deposit inventory, describes briefly the deposits of uranium and/or thorium in northern Ontario which, for the purposes of this circular, is defined as that part of Ontario lying north and west of the Grenville Front. The most significant of the deposits described are fossil placers lying at or near the base of the Early Proterozoic Huronian Supergroup. These include the producing and past-producing mines of the Elliot Lake-Agnew Lake area. Also included are the pitchblende veins spatially associated with Keweenawan diabase dikes of the Theano Point-Montreal River area. Miscellaneous Archean pegmatite, pitchblende-coffinite-sulphide occurrences near the Proterozoic-Archean unconformity fringing the Lake Superior basin, and disseminations in diabase, granitic rocks, alkalic complexes and breccias scattered throughout northern Ontario make up the rest of the occurrences.

Exploration was carried out principally in the period 1948 to 1957 with production at Elliot Lake starting in 1955. Peak production was reached in 1959, but cut back due to lack of civilian markets.

Exploration for uranium in Ontario resumed in 1965 with optimism for the future of nuclear power development. However, both markets and discoveries did not match expectations and the exploration pace again slackened. Further exploration took place in the late 1970's as the price of uranium rose sharply on the open market. Long term contracts were signed between Ontario Hydro and Preston Mines (now Rio Algom Limited) and Denison Mines Limited, ensuring production well into the 21 st century, the orderly expansion of the mining and milling facilities, the townsite at Elliot Lake, and the regional infrastructures Eldorado Nuclear is locating its principal refinery facilities at Blind River.

However, on the international scene there are still delays in the licensing of nuclear power stations, predictions of demand in the medium term are still being lowered as these delays, high capital costs, and high interest rates force cancellations or deferral of planned nuclear stations. On the supply side, recent discoveries of high grade deposits

particularly in Saskatchewan, Northern Territory of Australia, and Central Africa have led to concentration of the continuing exploration in these areas.

Nevertheless, given a modest increase in uranium price relative to costs, Ontario with its resources and infrastructure and operating know-how at Elliot Lake may well be able to compete successfully for future contracts. A more detailed discussion of the Ontario uranium mining industry is given by Runnalls (1981), and recently the Department of Energy, Mines and Resources has published a useful volume paper on topics affecting the nuclear energy industry.

Production of uranium from the Elliot Lake camp to the end of 1980 was approximately 260,000,000 pounds U_3O_8 grading 2.25 pounds U_3O_8 per ton.[1]

There has also been minor production of thorium and yttrium. Should a market for thorium develop, the Elliot Lake uranium deposits would constitute a major resource.

This report and companion publication from the Ontario Mineral Resource Group provides an up-to-date data base on Ontario's uranium deposits, their classifcation, distribution, resources, and the factors affecting their development on further exploration.

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[1] Runnalls 1981, Company Annual Reports.

URANIUM AND THORIUM DEPOSITS OF NORTHERN ONTARIO[2]

By

James A. Robertson[3] and Kerry L. Gould[4]

INTRODUCTION

This circular briefly summarizes data on uranium and/or thorium deposits in Northern Ontario and supercedes Mineral Resource Circular No. 9, published in 1968. (Robertson 1968) It is a part of a group of Mineral Resource Group publications providing an up-to-date data base on Ontario's Uranium Deposits; their classifcation, distribution, resources and factors affecting their development or further resources. The reader is referred to: Robertson, Gordon,and Rybak 1981; Robertson 1981 a. and b.; Robertson and Gould in press; and Runnalls 1981. Often Canada'a resources and the annual reports of the Uranium Resources Appraisal Group, (of the Department of Energy, Mines and Resources, Ottawa) and for international data, the biannual reports of the Organization for Economic Organization and Development (OECD), the annual deliberations of the Uranium Institute, and the industry workshop sponsored annually by the United States Department of Energy, provide good background on the state of the uranium exploration and extraction industries and the factors affecting their health.(Leahy 1973)

The recent edition of this circular has been necessitated by the considerable amount of data which has entered the public realm as a result of;

i) declassification of previuosly confidential material,
ii) the endeavours of the ministry of regional and geological staff, some of which are covered in the detailed maps and reports published by the Ontario Geological Survey and some maintained in the Geoscience Data Files of the Ontario Geological Survey or in the files of the Resident Geologists,
iii) two cycles of exploration for uranium completed since the first edition,
iv) the need to update product in data,
v) the naming of townships in Northern Ontario previously designated by numbers.

---

[2] Manuscript approved for publication by the Chief Geologist, Jan. 13/82.

[3] Policy Advisor, Mineral Resources Branch, Ministry of Natural Resources, Formerly Chief Mineral Deposits Section, Ontario Geological Survey.

[4] Geological Assistant, Mineral Deposits Section, Ontario Geological Survey.

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The principal uranium and thorium deposits of Ontario occur in the Blind River-Elliot Lake-Agnew Lake and Bancroft areas. The former are fossil placers at or near the unconformity separating the Lower Proterozoic Huronian Supergroup and the Archean (Robertson 1981, Adams and Button 1981, Houston and Karlstrom 1981) and the latter are pegmatitic granite dikes, pegmatites, metasomatic replacement deposits and calcite-flourite-apaitic veins in rocks of the Grenville Supergroup of the Grenville province. (Robertson, Gordon, and Rybak 1981; Gordon, Robertson, and Rybak 1981, and Robertson 1981) Only the pyritic quartz-pebble conglomerate of the Elliot Lake-Agnew Lake camp and certain pegmatites of the Bancroft area have supported production.

Because of the geological implications, for the purposes of this inventory the boundary between northern and southern Ontario have been taken as the Grenville Front, rather than a district or administrative boundary.

Figure 1 shows Ontario District and boundaries.

Figure 2 summarizes the geology of Ontario and shows the distribution of the principal deposit types using a classification comparable with that used by the Uranium Resource Appraisal Group (Department of Energy, Mines and Resources, Canada) and international publications such as;

OECD- Organization for Economic Cooperation and Development.
IUREP- International Uranium Resources Evaluation Project.

Table 1 shows the classification of deposit types, classification used in Ontario. For expanded discussion of the Ontario deposits the reader is referred to (Robertson 1981) and the maps showing distribution of these deposit types against geology. (Robertson, Gordon and Rybak 1981; Robertson in press a,b; Robertson and Gould in press)

Only the early Proterozoic pyritic quartz-pebble conglomerate of the Elliot Lake camp and the red unzoned pegmatite of the Bancroft area have supported production. The Federal Provincial Uranium Resources Appraisal Group studies have included minor amounts of low grade material in other deposit type in resources.

Table 2 lists the production data for the Blind River-Elliot Lake-Agnew Lake camp. Minor amounts of thorium and yttrium have also been produced but data is not in the public realm.

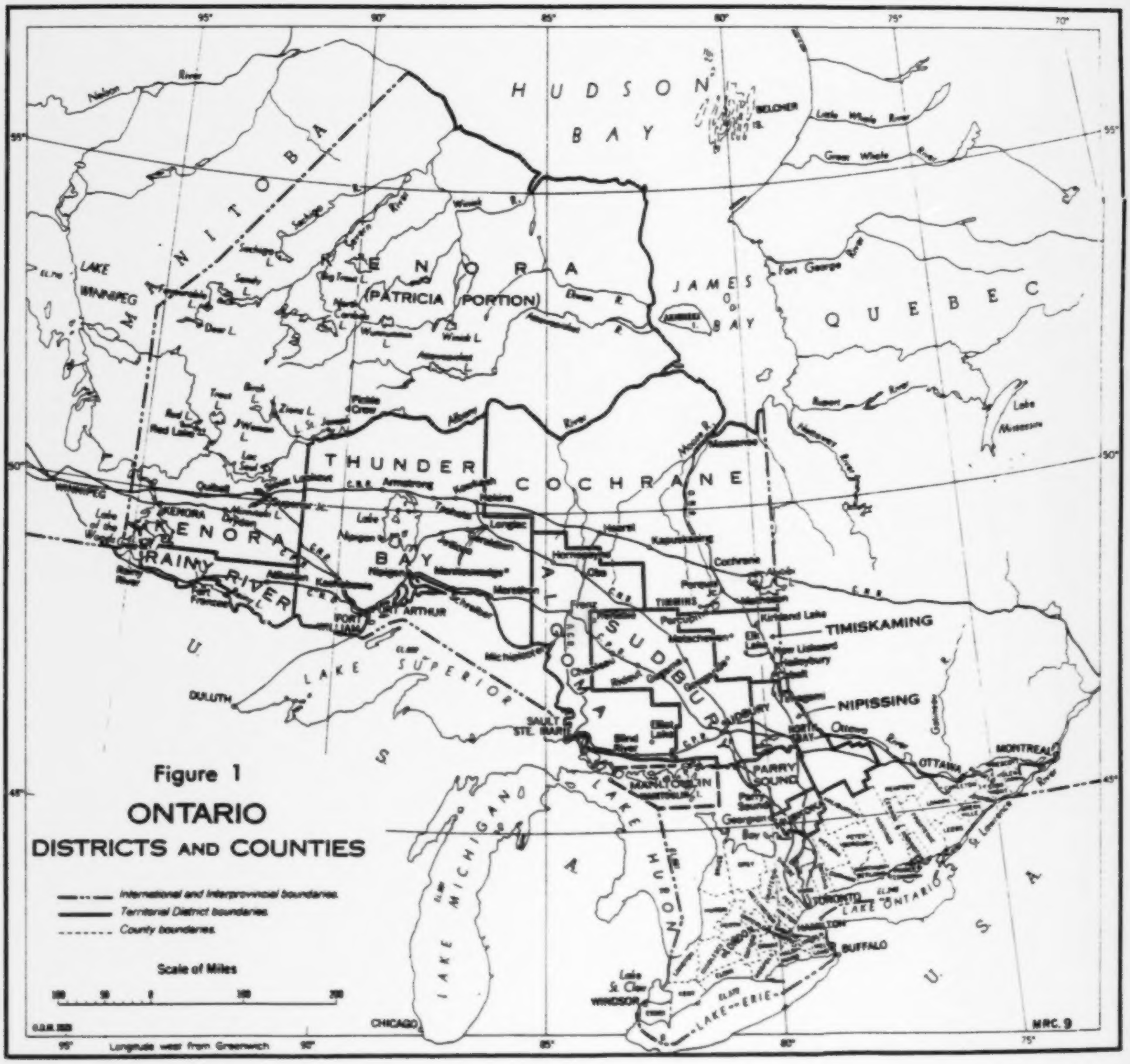
HUDSON BAY
JAMES BAY
BELCHER IS.
MANITOBA
QUEBEC
KENORA (PATRICIA PORTION)
KENORA
THUNDER BAY
COCHRANE
RAINY RIVER
ALGOMA
SUDBURY
TIMISKAMING
NIPISSING
PARRY SOUND
MANITOULIN
LAKE WINNIPEG
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ONTARIO
LAKE ERIE
Lake St. Clair
U. S. A.
WINNIPEG
KENORA
PORT ARTHUR
FORT WILLIAM
DULUTH
SAULT STE. MARIE
SUDBURY
NORTH BAY
TIMMINS
Cochrane
Kirkland Lake
OTTAWA
MONTREAL
TORONTO
HAMILTON
BUFFALO
WINDSOR
CHICAGO
Nelson River
Little Whale River
Great Whale River
Fort George River
Rupert River
Albany River
Moose R.
Ottawa River
St. Lawrence River
Longitude west from Greenwich
95°
90°
85°
80°
75°
70°
55°
50°
45°
MRC. 9

Figure 1

ONTARIO

DISTRICTS AND COUNTIES

- — · · — International and Interprovincial boundaries.
- ——— Territorial District boundaries.
- - - - - - County boundaries.

Scale of Miles

100 50 0 100 200

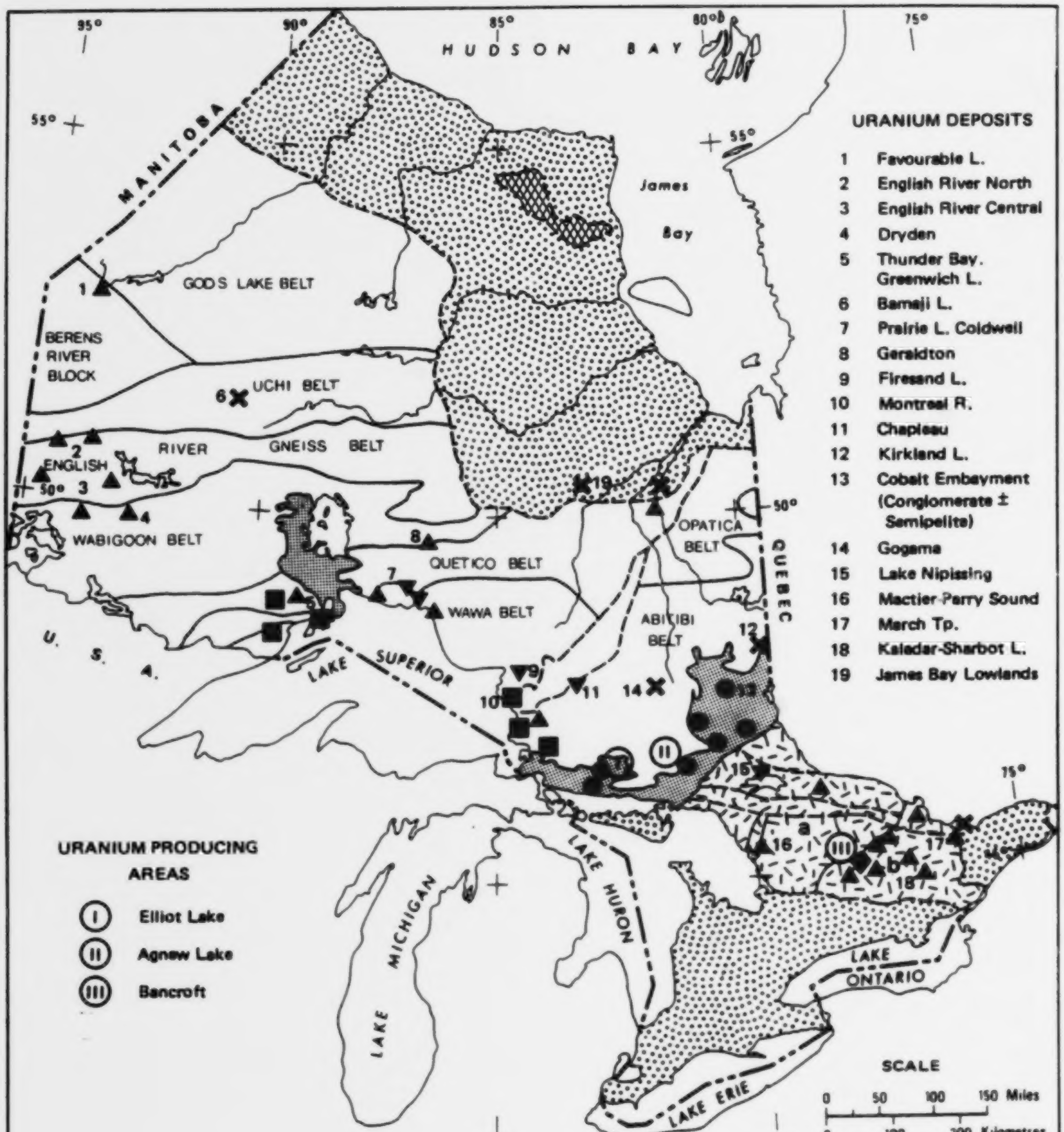
HUDSON BAY
James Bay
MANITOBA
QUEBEC
U. S. A.
GODS LAKE BELT
BERENS RIVER BLOCK
UCHI BELT
ENGLISH RIVER GNEISS BELT
WABIGOON BELT
QUETICO BELT
WAWA BELT
OPATICA BELT
ABITIBI BELT
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ONTARIO
LAKE ERIE
95°
90°
85°
80°
75°
55°
50°
URANIUM DEPOSITS
1 Favourable L.
2 English River North
3 English River Central
4 Dryden
5 Thunder Bay. Greenwich L.
6 Bamaji L.
7 Prairie L. Coldwell
8 Geraldton
9 Firesand L.
10 Montreal R.
11 Chapleau
12 Kirkland L.
13 Cobalt Embayment (Conglomerate ± Semipelite)
14 Gogama
15 Lake Nipissing
16 Mactier-Parry Sound
17 March Tp.
18 Kaladar-Sharbot L.
19 James Bay Lowlands
URANIUM PRODUCING AREAS
Ⓘ Elliot Lake
Ⓘⓘ Agnew Lake
ⒾⒾⒾ Bancroft
SCALE
0 50 100 150 Miles
0 100 200 Kilometres
LEGEND
Paleozoic & Mesozoic
PRECAMBRIAN
Superior Province
Southern Province
Grenville Province
Unclassified
b Late Precambrian
a Middle Precambrian
TYPE OF DEPOSIT
▼ Alkalic Complexes
▲ Pegmatitic
◆ Calc Silicate
■ Veins
● Conglomerate
✖ Other

Figure 2—Principal uranium deposits of Ontario.

Table 1 Classification of Uranium Deposits in Ontario

Magmatic Deposits

1. Carbonatite bodies and alkalic complexes, including fenites.
2. Calcalkaline extrusine rocks.

Magmatic

3. Pegmatite: a) red zoned
   b) red unzoned
   c) white
4. Calcsilicate (skarn) rocks and puroxenite.

Sedimentary (Detrital Deposits)

5. Quartz-pebble conglomerata: a) pyrite-uranium-thorium
   b) iron oxide-thorium
6. Polymictic conglomerate, semipelitic rocks.

Circulating Mineralized Solutions*

7. a) pitchblende with simple mineralogy (Athabasca type).
   b) pitchblende with multi-metal mineralogy (Bohemia type).
   c) Mineralization of unspecified nature, generally related to an unconformity and found in argillite, greywacke, sandstone, carbonate rock, and lignite.
   d) Uraninite-calcite-apatite-fluorite veins.

Unclassified Deposits

8. Usually small occurrences about which little is known

* Largely equivalent to the vein deposits of the OECD (1977) and of Robertson (1975), or the "hydrogenic deposits" of McMillan (1977).

Table 2

Production data for the Blind River-Elliot Lake-Agnew Lake camp.

Rio Algom Limited

Year	Thousands of Tonnes of Ore Milled	Tonnes U Produced	Recovered Grade % U
1961	2,586	2,687	0.10
1962	1,879	1,921	0.10
1963	1,820	1,842	0.10
1964	1,554	1,586	0.10
1965	1,080	1,045	0.10
1966	1,166	1,054	0.09
1967	1,168	991	0.08
1968	1,059	882	0.08
1969	1,236	1,265	0.10
1970	1,309	1,537	0.12
1971	1,419	1,728	0.12
1972	1,407	1,984	0.14
1973	1,287	1,853	0.14
1974	1,312	1,897	0.14
1975	1,330	1,784	0.13
1977	1,520	1,664	0.11
1978	1,965	1,905	0.10
1979	2,224	2,188	0.10
1980	2,434	4,886	0.10

Agnew Lake Mines Limited

Year	Tonnes U Produced
1977	27
1978	154
1979	172

Denison Mines Limited

1961	1,845	2,069	0.11
1962	1,659	1,863	0.11
1964	1,157	1,519	0.13
1965	807	985	0.12
1966	891	1,057	0.12
1967	1,106	1,365	0.12
1968	1,194	1,478	0.12
1969	1,122	1,540	0.14
1970	1,069	1,395	0.13
1971	1,258	1,637	0.13
1972	1,319	1,506	0.11
1973	1,299	1,317	0.10
1974	1,170	1,080	0.09
1975	1,216	1,120	0.09
1976	1,381	1,197	0.09
1977	1,868	1,539	0.08
1978	2,181	1,881	0.09
1979	2,214	1,729	0.08
1980	2,509	2,225	0.09

Runnall's 1981 and Company Annual Reports

Table 2 (cont)

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	Total
Can-Met			240,765	12,757,325	17,852,702	6,740,000							37,590,792
Denison (Consol. Denison)			13,122,000	42,042,514	49,552,089	32,047,137	39,732,485	39,791,162	36,344,601	27,031,841	16,319,154	14,478,154	310,461,742
Northspan[b.]			1,674,452	45,270,362	55,966,513								102,911,507
Preston (Stanleigh[c])				10,205,214	20,970,362	21,687,400							52,862,976
Rio Algom							72,928,000	46,096,000	48,859,500	25,903,000			588,073,988
Lacnor[b]						14,015,380							
Milliken[d]				11,890,000	21,625,870	23,690,009							
Nordic			22,590,000	26,875,000	25,544,554	23,141,706					30,102,000	27,520,769	
Panel[b]													
Pronto[e]	487,054	7,281,100	11,021,741	12,219,639	13,639,541	3,352,774							
Quirke		1,615,100	22,840,000	22,900,000	23,049,120	22,794,342							
Stanrock				6,997,505	17,994,760	22,709,237	22,616,136	20,704,231	10,912,162	8,437,213	813,437	754,861	111,939,843

a. Concolisdated Denison Mines Limited. 1957-1959
b. Northspan Uranium Mines Limited includes dollar value for Lacnor, Panel and South American Mines 1957-1959.
c. Stanleigh Uranium Mining Corporation Limited 1958-1959.
d. Milliken Lake Uranium Mines Limited 1958-1959.
e. Pronto Uranium Mines Limited. 1955-1959.
* Dollar value included in Rio Algom total.

Grand Total to the end of 1966 56,077,179 tons milled; 128,160,096 pounds U_3O_8; $1,203,840,848

(Robertson 1968)

This circular also includes the pitchblende occurrences of the Theano Point-Montreal River area where the pitchblende veinlets are found in or near the contact zone of the Keweenawan diabase dikes.(Nuffield 1955, Robertson 1968a. and 1978) There has been no production from the Theano Point area but it is of historical interest as the first recorded occurrence of pitchblende in Canada and the rediscovery of the area in 1948 was an important step leading to the discovery of Elliot Lake - a world class deposit. The circular also lists a number of pitchblende-coffintie-sulphide occurrences possibly related to the Proterozoic-Archean unconformity adjacent to the Lake Superior Basin.

A number of other deposit types such as Archean pegmatites, dissemination in diabase, alkalic complexes and breccias and two areas where there are deposits possibly genetically related to Archean volcanic soils are described.

Uranium and thorium are potential by-products from some carbonatite complexes which contain the material of commercial interest, and the Elliot Lake uranium deposit is a major potential source of thorium.

Acknowledgements

The writers are greatly indebted to the Resident Geologists and Mineral Resource Coordinators attached to the Ministry Regional staff in horthern Ontario for much of the data summarized in the following paper. Many company officials, prospectors, and individuals have given access to their records and their assistance over many years is gratefully acknowledged.

The senior author wishes to acknowledge the continued assistance afforded him by the professional and support staff of the Ontario Geological Survey during the preparation and processing of this report.

Explanation of This Circular

Uranium occurrences are listed alphabetically under district, township and company names. It should be noted that since publication of the first edition all numbered townships in Ontario have been named. Further, as many showings and occurrences change hands frequently, it is generally more convenient to use a geographic or a well known name as the permanent name for an occurrence. This may mean that a deposit is named for the discoverer or a previuos owner rather than the present or latest owner. An index to names and location is provided at the back of this circular. The reader may find it convenient to refer to the Mineral Map of Ontario Map 2310 or the Map of Uranium and Thorium Deposits of Ontario. (Sheets show the districts, townships, mining districts, and the location of the deposit.)

Low grade uranium deposits are ones on which little or no work has been done are listed in tables under Miscellaneous Occurrences.

In general, only the most up-to-date references are quoted for description and location. However, where there are additional references of particular significance, these may also be referenced. Publications such as the Canadian Mines Handbook, or the Financial Post Survey of Mines, and the Finanical Post Survey of Energy Resources contain information on many of the companies listed.

Data has been collected continuously since the preparation of the first edition. Information on property developments does not extend beyond the end of 1980.

Abbreviations used in this circular are given below as are a list of standard metric conversions. Data is given in the measurement format in which it was originally recorded.

Note: Early measurement of radioactivity and early assay methods particularly those based on a non-discriminating radiation measuring device should not be necessarily considered reliable but only indicative of anomalous radioactivity.

In recent years field examination of occurrences has generally included the use of discriminating radiation measurement devices. In more detailed studies the operation of equilibrium is also addressed. In re-examining old showings the "state of the art" at the time of the original work should be borne in mind.

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1981: Uranium-Bearing Quartz-Pebble Conglomerates: Exploration Model and United States Resource Potential; prepared for the United States Department of Energy, Grand Junction Office, Colorado, GJBX-1, p. 1-509.

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Leahy, E.J.
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1955: Geology of the Montreal River Area; Ontario Department of Mines, Volume 64, part 3, 32 p. Accompanied by Map 1955-1. Scale 1 inch to ½ mile.

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1979: Uranium Resources Production and Demand; A Joint Report by the OECD Nuclear Energy Agency and the International Atomic Energy Agency, December 1979; Organization for Economic Cooperation and Development, 135 p. Paris France.

Robertson, J.A.
1968a: Uranium and Thorium Deposits of Northern Ontario, Ontario Department of Mines, Mineral Resource Circular No. 9, 106p.

b: Geology of Township 149 and Township 150; Ontario Department of Mines, Geological Report 57, 162p. Accompanied by Maps 2113 and 2114. Scale 1 inch to ¼ mile. Charts A,B,C,D, and E.

1978: Uranium Deposits of Ontario; p. 229-289 *in* M.M. Kimberley, Editor: Short Course in Uranium Deposits; Their Mineralogy and Origin, Mineralogical Association of Canada, Toronto, 1978.

In Press: Uranium and Thorium Deposits of Ontario, Northwestern Sheet, Kenora District (Patricia Portion); Ontario Geological Survey Preliminary Map P. 2425, Mineral Deposits Series; Scale 1:1 013 760 or 1 inch to 16 miles. Compilation 1981.

In Press: Uranium and Thorium Deposits of Ontario, West Central Sheet, Districts of Kenora (Patricia Portion), Thunder Bay, Algoma, and Cochrane; Ontario Geological Survey, Preliminary Map 2427, Mineral Deposits Series. Scale 1:1 013 760 or 1 inch to 16 miles. Compilation 1981.

Robertson, J.A., Gordon, J.B., and Rybak, U.C.
1981: Uranium and Thorium Deposits of Ontario, Southern Sheet, Southern Ontario and Nipissing, Muskoka, Parry Sound, Sudbury, and Manitoulin Districts; Ontario Geological Survey Preliminary Map P. 2424, Mineral Deposit Series. Scale 1:1 013 760 or 1 inch to 16 miles. Compilation 1980 and 1981.

Robertson, J.A. and Gould, K.L.
1981: Uranium and Thorium Deposits of Ontario, East Central Sheet, Districts of Thunder Bay, Cochrane, Algoma, Sudbury, Timiskaming, and Nipissing; Ontario Geological Survey Preliminary Map P. 2426, Mineral Deposits Series. Scale 1:1 013 760 or 1 inch to 16 miles. Compilation 1981.

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1981: "Ontario's Uranium Mining Industry - Past, Present, and Future", Ontario Ministry of Natural Resources, Mineral Background Paper No. 13 (6/81).

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AFRO - Assessment File Research Office
chem - chemical
GSC - Geological Survey of Canada
MRC - Mineral Resource Circular
ODM - Ontario Division of Mines
OGS - Ontario Geological Survey
OMNR - Ontario Minstry of Natural Resources
RE - radiometric equivalent
S - Sudbury files
SMDR - Source Mineral Deposits Record
SSM - Sault Ste Marie files

1 tonne U = 1.30 short tons U_3O_8
0.77 short ton U_3O_8 = 1 tonne U
U_3O_8 X 0.85 = U
1 tonne = 1.10 short tons
1 short ton = 0.91 tonne
1 lb U_3O_8 x 0.38 = kg U
1 kg U x 2.6 = lb U_3O_8

Rio Tinto Canadian Exploration Limited Prospect

Commodity:

Uranium, thorium

Radioactive Minerals:

Location:

Latitude 46°29'55"N Longitude 83°43'50"W
Aberdeen Township
Map Reference: OGS Map 2419

Geology:

It is underlain by mafic volcanics and pink medium to coarse grained feldspathic quartzite, brown to green arkosic quartzite and quartz-pebble conglomerate of the Matinenda Formation.

Economic Features:

Assays from samples from drill holes by Amax Exploration Inc. averaged 0.31 lb U_3O_8 over 3.0 feet.

History of Development:

1955: Six drill holes by Sagamore Exploration.

1956: Six drill holes, totalling 2,025 feet, were located in N½ Lot 3, Concession IV, S½ of Lot 3, Concession V, S½ of Lot 4, Concession V and N½ of Lot 4, Concession V. Work by Rio Tinto Canadian Exploration Limited.

1968: Airborne magnetic, electromagnetic and radiometric surveys by Amax Exploration Inc.

1969: Ten drill holes totalling 6,914 feet were drilled by Amax Exploration Inc.

1970: A geological survey was completed by Amax Exploration Inc.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts: OMNR., Geological Compilation Series, Map 2419 scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Rio Tinto Canadian Exploration Limited; p.4, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63.3026, Amax Exploration Inc., 1970.
- Technical File No. 63.2443, Amax Exploration Inc., 1969.
- Aberdeen Township, Drill Log Report No. 10, Amax Exploration Inc., 1969.
- SMDR File No. 000001.

Little White River Occurrence

Commodity:

Uranium

Radiactive Minerals:

Unknown

Location:

Latitude 46°34'45"N Longitude 82°58'34"W
Albanel Township
Map Reference: OGS Map 2419

Geology:

This occurrence lies in the Southern Structural Province and is underlain by Middle Precambrian Huronian metasediments. Surface exposures consist of Mississagi quartzites of the Hough Lake Group.

Economic Features:

Selected samples gave assay values of 0.04% U_3O_8 (0.8 lbs.) (OGS, AFRO, Toronto, Technical File No. 63A.534).

Radioactivity of 10 to 20 times the background is not uncommon. Locally this may rise to 40 times the background when quartz pebbles are present.

History of Development:

1968: Geological survey by G.E. Parsons.

1969: Ground magnetic survey and one hole to 3,002 feet. Work by the Hanna Mining Co.

1974: A multi-sensor airborne geophysical survey. Work by Fort Norman Explorations Inc.

Principal References:

Giblin, P.E., and Leahy, E.J.
1979: Sault Ste. Marie - Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Siemiatkowska, K.M,; Grunsky, Eric; and Berger, B.R.
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OGS, AFRO, Toronto - Albanel Township, Drill Log Report No. 17, The Hanna Mining Co., 1969.
- Technical File No. 63A.534, G.E. Parsons, 1968.
- Technical File No. 63.3461, The Hanna Mining Co., 1969.
- Technical File No. 2.1575, Fort Norman Explorations Limited, 1974.
- SMDR File No. 000265.

Candore Explorations Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°30'42"N Longitude 82°43'10"W
Beange Township
Map Reference: OGS Map 2419

Geology:

The sediments lie unconformably on Early Precambrian granite which was intersected by seven drill holes ranging from 311 feet to 652 feet. Slightly radioactive thin oligomictic pebble conglomerate bands in Upper Mississagi Formation with pyrite in the matrix were intersected in drilling.

Economic Features:

The bands are normally less than six inches and assayed less than 0.02% U_3O_8. The best assay was 0.043% U_3O_8 over one foot.

History of Development:

1953 - 1954: Geological and radiometric surveys were performed. Seventeen drill holes totalling approximately 7,500 feet were drilled for Pitchgoma Mines Limited.

1955: One drill hole drilled to 2,244 feet, near Dunlop Lake by Delta Minerals Limited.

1966: The claim group was optioned to Denison Mines Limited.

1966 - 1967: Three drill holes totalling 5,028 feet were drilled by Denison Mines Limited.

1975: The claim group was sold to Gateway Uranium Mines.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake;Algoma, Manitoulin,and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Candore Explorations Limited; p.46, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Beange Township, Drill Log Report No. 10, Pitchgoma Mines Limited, 1953-1954.
- SMDR File No. 000115.

Consolidated Callinan Flin-Flon Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°32'00"N Longitude 82°47'26"W
Beange Township
Map Reference: ODM Map 2015

Geology:

This occurrence lies in the Southern Structural Province and is underlain by Middle Precambrian Huronian Metasediments comprised of greenish, coarse-grained arkose quartzite with interbeds and lenses of slightly radioactive pyritized pebble conglomerate of Mississagi Formation of the Hough Lake Group.

Economic Features:

A geiger survey showed numerous readings of 0.02, 0.03, and 0.05 (milli-roentgens/hr.). The area with the highest readings is on the southwest shore of Gibbery Lake. Here, readings of 0.10 and 0.14 (mr/hr) were obtained over a length of 350 feet in quartz-pebble conglomerate closely associated with pea-green quartzite.

History of Development:

1955: Ground radiometric, geological surveys were performed. Three drill holes totalling 871 on former claim numbers SSM 25756 and SSM 25745. One hole to 522 feet drilled in Rainbault Township (Tp. 157). Work by Callinan Flin-Flon Mines Limited.

1957: One hole to 50 feet drilled by Consolidated Callinan Flin Flon-Mines Limited.

1970: Airborne magnetic and electromagnetic for A. St. Denis.

Principal References:

Robertson, J.A.
1963: Consolidated Callinan Flin-Flon Mines Limited; p.53, 61, *in* Townships 155, 156, 161, and 162, ODM, GR 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

Robertson, J.A.
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OGS, AFRO, Toronto - Beange Township, Drill Log Report No. 14, Callinan Flin-Flon Mines Limited, 1955.
- Technical File No. 63A.239, Callinan Flin-Flon Mines Limited, 1955.
- Technical File No. 63.2736, A. St. Denis, 1970.
- SMDR File No.

Rio Algom Limited

Quirke Group West Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 30' 31" N Longitude 82° 42' 16" W
Beange Township
Map Reference: ODM Map 2015

Geology:

This occurrence is underlain by Middle Precambrian Huronian metasediments comprised of coarse-grained, green arkose with slightly radioactive oligomictic pebble bands of the Mississagi Formation of the Hough Lake Group.

Economic Features:

Unknown

History of Development:

1954-1955: Geological and geophysical surveys and 3 drill holes were completed by Algom Uranium Mines Limited.
1954: Algom Uranium Mines Limited merged with other companies to form Rio Algom Mines Limited. The name was later changed to Rio Algom Limited.

Principal References:

Robertson, J.A.
1963: Algom Uranium Mines Limited, Quirke Group West; p.55, in Townships 155, 156, 161, and 162; ODM Geological Report No. 13, 88p. Accompanied by Maps 2104, 2015, 2026, and 2027, scale 1 inch to ¼ mile.

OGS, AFRO, Toronto - SMDR File No. 000117.

Rio Algom Limited

Span-North Mining Claims Limited

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 31' 05" N Longitude 82° 43' 56" W
Beange Township
Map Reference: ODM Map 2015

Geology:

This occurrence is underlain by Middle Precambrian Huronian metasediments, comprised of Mississagi quartzite and arkose of the Hough Lake Group , with interbeds and lenses of slightly radioactive pebble conglomerate. Scattered thin pebble bands with minor pyrite were intersected in drill holes.

Economic Features:

Assays averaged 0.32% U_3O_8 over 0.5 feet.

History of Development:

1954-1955: Geological and airborne scintillometer surveys were completed. Ten drill holes totalling 8,558 feet werrilled by Panel Consolidated Uranium Mines Limited.

1957-1958: Five drill holes totalling 2,833 feet were drilled by Northspan Uranium Mines Limited.

1956: Panel Consolidated Uranium Mines Limited merged into Northspan Uranium Mines Limited and property was transferred to Span-Nrth Mining Claims Limited.

1960: Span-North Mining Claims Limited merged with Algom Uranium Mines Limited.

Principal References:

Robertson, J.A.

1963: Span-North Mining Claims Limited;p. 75-77, in Townships 155, 156, 161, and 162, ODM Geological Report No. 13,88p. Accompanied by Maps 2104, 2015, 2026, and 2027, scale 1 inch to ¼ mile

1968: Rio Algom Mines Limited, Anglo Rouyn and Armistice Groups; p. 47-48, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Beange Township, Drill Log Report No. 11, Panel Consolidated Uranium Mines Limited, and Northspan Uranium Mines Limited, 1954-1958.
- SMDR File No. 000118.

Gui-Por Uranium Mines and Metals Limited Prospect

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°23'57"N Longitude 82°49'20W
Bolger Township
Map Reference: ODM Map 2014

Geology:

The uranium mineralization is located within the Matinenda Formation of the Elliot Lake Group. Three diamond drill holes encountered oligomictic pebble bands and the assays averaged 0.040% U_3O_8 over 5.2 feet.

History of Development:

1954 - 1955:	Geological and scintillometer surveys were completed. 15 diamond drill holes totalling 6,923 feet were drilled by New Jersey Zinc Exploration Co. (Canada) Limited. Further surface exploration work was done by Rio Tinto Canadian Exploration Limited.
1974:	Airborne magnetic, electromagnetic and gamma ray spectrometer surveys were completed by Fort Norman Exploration Incorporated.

Principal References:

Robertson, J.A.
1963: Gui-Por Uranium Mines and Metals Limited; p.65, in Townships 155, 156, 161, and 162, ODM, GR 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Technical File No. 63A.303, New Jersey Exploration Company (Canada) Limited, 1954-1955.
- Technical File No. 2.1575, Fort Norman Exploration Incorporated, 1974.
- Bolger Township, Drill Log Report No. 13, Gui-Por Uranium Mines and Metals Limited, 1954-1955.
- SMDR File No. 000111.

Moon Lake Mines Limited Occurrence

Moon Lake Zone

Commodity:

Uranium and thorium.

Radioactive Minerals:

Unknown

Location:

Latitude 46° 24' 10" N Longitude 82° 49' 30" W
Bolger Township
Map Reference: ODM Map 2014

Geology:

Only thin bands and lenses of slightly radioactive conglomerates considered to belong to the Matinenda Formation of the Elliot Lake Group were present.

Economic Features:

Average assay results from four drill holes were 0.054% U_3O_8 over 3.2 feet.

History of Development:

1954-1955: Geological and scintillometer surveys were completed. Four holes were drilled totalling 2,188 feet in Bolger Township, and twenty holes were drilled in Timmermans Township. All work was completed by New Jersey Zinc Exploration Company Canada Limited.

1957: Surface mapping was completed by Rio Tinto Canadian Exploration Limited.

1967 1967: An airborne magnetometer survey was completed by Denison Mines Limited.

1974: Airborne electromagnetic, magnetometer, radiometric, and resistivity surveys were completed by Fort Norman Explorations Incorporated.

Principal References:

Robertson, J.A.
1963: Moon Lake Uranium Mines Limited; p.70, in Geology of Townships 155, 156, 161, and 162, ODM, Geological Report No. 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch ¼ mile.

OGS, AFRO, Toronto
- Technical File No. 63A.303, New Jersey Zinc Exploration Company (Canada) Limited, 1955.
- Bolger Township, Drill Log Report No. 14, Moon Lake Uranium Mines Limited, 1955.
- Technical File No. 63A.342, Moon Lake Uranium Mines Limited, 1958.
- Technical File No. 2.1575, Fort Norman Explorations Incorporated, 1974.
- Bolger Township, Drill Log Report No. 39, Fort Norman Explorations Incorporated, 1976.
- Timmermans Township, Drill Log Report No. 43, Fort Norman Explorations Incorporated, 1976.
- SMDR File No. 000112.

Nordic Group West Prospect

Moon Lake Zone

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 23' 58" N Longitude 82° 45' 16"W
Bolger Township
Map Reference: ODM Map 2014

Geology:

Conglomerate of the Bruce Formation is exposed along the north boundary of the area. Minor intersections of oligomicitic conglomerate bearing traces of U_3O_8 were encountered.

History of Development:

1953-1958: Geological and geophysical surveys and extensive drilling totalling over 17,044 feet was completed by Algom Uranium Mines Limited.

1960: Amalgamated with Rio Algom Mines Limited.

1966: An airborne magnetic survey was completed by B.B. Scott and Chandler.

1970: An airborne spectrometer survey was completed by Kerr-McGee of Canada Limited.

1978: An airborne geophysical survey was completed by Fort Norman Explorations Incorporated.

Principal References:

Robertson, J.A.
1963: Algom Uranium Mines Limited, Group 2, Nordic Group West; p. 54, in Geology of Townships 155,156,161, and 162, Ontario Department of Mines Geological Report No. 13, 88p. Accompanied by Maps 2104, 2015,2026,and 2027, scale 1 inch to ¼ mile.

OGS, AFRO, Toronto - Bolger Township, Drill Log Report
                     Nos. 10, 20, 21, 22, and 23, Algom
                     Uranium Mines Limited.
                   - SMDR File No. 000113.

R. Benner Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°29'53"N Longitude 82°38'40"W
Bouck Township
Map Reference: ODM Map 2114

Geology:

Oligomictic uraniferous quartz-pebble conglomerates of the Matinenda Formation of the Elliot Lake Group are mined on the Rio Algom property which adjoins claim S67400 to the north. Diamond drilling on this claim intersected uranium bearing conglomerates from depths of 2,679 feet to 2,707 feet.

Economic Features:

Assays of the mineralized zone showed 0.025% U_3O_8 over 11 feet, from 2,679 - 2,690 feet and 0.061% U_3O_8 over 13.25 feet from 2,693.5 - 2,706.75 feet.

History of Development:

1954: One diamond drill hole totalling 2,785 feet by Ralph

1975: This area now belongs to Denison Mines Limited.

Principal References:

Robertson, J.A.
1967: Township 150, Algoma District; ODM, Geological Map 2114, scale 1:15,840 or 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Bouck Township, Drill Log Report No. 13, R. B~~r~~enner, 1954.

Denison Mines Limited

Denison Mine

Commodity:

Uranium, yttrium, and thorium.

Radioactive Minerals:

Brannerite, monazite, uraninite, uranothorite, and uranothorianite.

Location:

Latitude 46° 29' 35" N Longitude 82° 35'54" W
Bouck Township
Map Reference: OGS Map 2419

Geology:

The main orebody (Denison Reef) occurs from 0 to 180 feet above the Early Precambrian basement and 210 to 230 feet below an argillite horizon. It is a tabular-shaped mass covering a projected surface area of 8,000 feet by 14,000 feet. The ore zone averages 16.7 feet thick and strikes S 65° E with an average dip of 19° S.

The ore zone is composed of two horizons known as the "A" and "B" Zones. They average 8 feet in thickness. The average depth of the ore zone is 1,000 feet at the north end and 3,000 feet at the south end. The "C" Zone above the "A" and "B" averages 6 by 100 feet in size. The "D" and "E" Zones are conglomerate beds 50 and 70 feet below the argillite.

The ore-bearing conglomerates are a uranium-bearing oligomicitc quartz-pebble conglomerate.

Economic Features:

From the year 1961 to 1980 production from Denison Mines Limited has been 98,704,000 tons of ore milled producing 30,155,000 tonnes of uranium with an average grade of 0.09% uranium.

History of Development:

1956: The No. 1 shaft (1,857 feet and 6 compartments) was completed. The trackless mining method was initiated.

1957: The second shaft (8 compartments to 2,750 feet) was completed.

Crushing and acid leach plants began production. The mill was rated at 6,000 tons per day.

Mining by the room and pillar method was used.

1960: Consolidated Denison Mines Limited and Can-Met Explorations Limited amalgamated to form Denison Mines Limited.

1970: A 6,200 foot connecting drive was completed between the two mines.

1973: Denison Mines Limited amalgamted with Stanrock Uranium Mines Limited. The mill rate was up to 7,000 tons per day, producing 12,000 to 13,000 pounds of U_3O_8 and 400 pounds of yttrium.

1978: Production was up to 2,404,000 tons of ore producing 4,889,000 pounds of U_3O_8 at 2.15 pounds per ton.

Dewatering, expansion, and technological upgrading took place at the Stanrock and Can-Met Mines.

The capacity of the central processing plant increased to 15,000 tons per day. Mining capacity increased to 21,000 tons per day.

1980: Underground expansion was completed including the dewatering of the Stanrock Mine. The mill is to be completed in 1981. Production was up to 2,510,000 tons of ore producing 4,451,823 pounds of U_3O_8 at 1.87 pounds per ton.

Principal References:

Canadian Mines Handbook 1979-1980, published by the Northern Miner Press Limited, 1979.

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Griffith, J.W.
1967: Denison Mines Limited; p. 102-124, in The Uranium Industry-Its History, Technology and Prospects; Mineral Resources Division, Department of Energy, Mines and Resources, Ottawa, Mineral Report No. 12, 335 p.

Robertson, J.A.
1968: Dension Mine; p. 109-110, in Geology of Township 149 and Township 150, Ontario Department of Mines, Geological Report 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to ½ mile. Charts A,B,C,D, and E.

Runnalls,J.C.
1981: "Ontario's Uranium Industry - Past, Present and Future", Ontario Ministry of Natural Resources, Mineral Background Paper No. 13 (6/81).

The Northern Miner, November 6, 1975, Vol. 61, No. 34, p.l.

A.G. Gemico Prospect

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°27'16"N Longitude 82°40'06"W
Bouck Township
Map Reference: OGS Map 2419

Geology:

Diamond drill holes have traced the Cobalt, Quirke Lake, HoughLake and Elliot Lake Groups down to the basement rocks. The Matinenda Formation of the Elliot Lake Group is composed of zones of quartz-pebble conglomerate in a matrix of arkose.

Economic Features:

Based on a potential zone 15,000 feet by 4,000 feet by 36 feet at 0.7 lbs/ton, reserves are estimated at 180,000 tons of ore and 126,000,000 lbs U_3O_8 (Annual Report, 1975, Canuc Mines). Available assays for one sample show 0.5 lbs/8 feet ThO_2. (OGS, AFRO, Toronto, Bouck Tp. Drill Log Report No. 25, 1967-1969).

History of Development:

1955 - 1956:	Four drill holes totalling 4,016 feet were drilled near the north shore of Banana Lake. Work by Kerr-McGee Corporation.
1966 - 1974:	Airborne magnetometer, electromagnetic, radiometric surveys, and three drill holes totalling 14,932 feet were drilled. Work by Kerr-McGee Corporation.

Principal References:

Annual Report (1975) Canuc Mines (company report).

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie- Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto

- Bouck Township, Drill Log Reports No. 25 and 28, Kerr-McGee, Corporation, 1967-1969.
- Bouck Township, Drill Log Report No. 15, Buffana Uranium Mines Limited, 1955-1956.
- Technical File No. 63.2802, Kerr-McGee Corporation, 1970.
- Technical File No. 63.2145, Kerr-McGee Corporation, 1966.
- SMDR File No. 001106.

Kerr-McGee Corporation, 150-151 Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°27'45"N Longitude 82°36'16"W
Bouck Township
Map Reference: OGS Map 2419

Geology:

Diamond drill holes in this occurrence indicated formations of the Huronian Supergroup including the Cobalt, Quirke Lake, Hough Lake and Elliot Lake Groups. Oligomictic quartz-pebble conglomerates of the Matinenda Formation are mined by Rio Algom and Denison Mines Limited in the vicinity.

Economic Features:

The Matinenda Formation was intersected at the 4,656-foot level and extended to 4,967 feet. Average assays are 0.083% U_3O_8 and 0.123% ThO_2 over 3.0 feet.

History of Development:

1966: Airborne electromagnetic surveys were completed by B.B. Scott and L.T. Chandler and the Kerr-McGee Corp.

1968: One diamond drill hole for 5,002 feet by Kerr-McGee Corp.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Bouck Township, Drill Log Report No. 24, Kerr-McGee Corporation, 1968.
- Technical File No. 63.1898, B.B. Scott, 1966.
- Technical File No. 63.2074, Kerr-McGee Corporation, 1966.

Rio Algom Limited

Quirke Mine No. 1

Commodity:

Uranium, thorium, and rare earths.

Radioactive Minerals:

Brannerite, uraninite, thorite, and uranothorite.

Location:

Latitude 46° 30' 45" N Longitude 82° 39' 48" W
Bouck Township
Map Reference: ODM Map 2114

Geology:

Uranium mineralization occurs within oligomictic quartz-pebble conglomerates at the base of the Matinenda Formation. The ore zone outcrops at the north end of the property and reaches a depth of 1,600 feet at the south end. In the vicinity of the deposit are a series of conglomerate horizons called the"Upper Reef"and the "A" Reefs. In the "A" reef ore occurs as lenses of uraniferous quartz-pebble conglomerate interbedded with quartzite. The strike length is 7,300 feet, the average thickness is 12 feet and the down slope length is 2,000 feet.

Economic Features:

From 1956 to 1961 4,173,327 tons of ore were milled producing 5,264,000 pounds of U_3O_8 at a grade of 2.34 pounds U_3O_8 per ton.
In 1966 102,515 pounds of U_3O_8 were recovered from the mine waters.

History of Development:

1953: After surface trenching and sampling geological and airborne scintillometer surveys were completed. Two hundred and three drill holes totalling 87,548 feet were drilled along the strike of the conglomerate at 200 foot intervals.

1955: A shaft was dug to 861 feet. A 77 foot adit was added.

1956: A 3,000 ton per day mill was put into operation.

1961: In March of this year operatons were suspended. Total underground development included 74,747 feet of drifts, and 19,924 feet of crosscuts. All of this and previous work was completed by Algom Uranium Mines Limited.

1965: The mine was dewatered and the waters were treated for recovery at the Nordic mill.

1967: Production resumed from the No. 1 shaft.

1968: The Quirke mill was operating at 3,700 tons per day.

1971: Operations at this mine ceased in the latter part of this year at which time operations were transferred to the New Quirke Mine (Quirke No. 2).

Total development as of December 1971 was 98,893 feet of drifts and 19,938 feet of crosscuts. A further 1,798 feet of diamond drilling were completed underground. The total from 1969 to 1971 was 19,895 feet.

All the work was completed by Rio Algom Mines Limited.

References:

Griffith, J.W.
1967: The Uranium Industry - Its History, Technology and Prospects, Mineral Resources Division, Deptartment of Energy, Mines and Resources, Ottawa, Mineral Report No. 12, 335 p.

Robertson, J.A.
1968: Geology of Township 149 and Township 150; ODM Geological Report No. 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to ¼ mile. Charts A to E.

Mineral Resources Branch, Department of Energy, Mines and Resources, Ottawa, File 41 J/10, U6, Quirke No. 1, May 1973.

Rio Algom Limited, Company Annual Reports.

Rio Algom Limited

New Quirke Mine No. 2

Commodity:

Uranium and thorium.

Radioactive Minerals:

Uraninite, brannerite, and monzite.

Location:

Latitude 46° 30' 16" N Longitude 82° 37' 15" W
Bouck Township
Map Reference: OGS Map 2419

Geology:

Uranium mineralization occurs within oligomictic quartz-pebble conglomerates at the base of the Matinenda Formation.

The best development is in the Denison "C" Reef some 100 feet below the Quirke "A" Reef. The Denison Reef usually contains to conglomerate zones each 6 to 12 feet thick separated by arkose 2 to 3 feet thick. Radioactive minerals usually constitute 10 to 15% of the conglomerate's pyritic, sericitic, feldspathic quartz matrix.

Economic Features:

In 1980 the average grade was 2.1 pounds per ton U_3O_8, at a recovery rate of 4,886 pounds U_3O_8 from a mill rate of 6,975 tons of ore per day.

History of Development:

1953: This property was staked by Preston East Dome Mines Limited. The property was subsequently sold to Algom Uranium Mines Limited.

1960: The New Quirke shaft was begun.Operations were suspended. The company name was change to Rio Algom Limited.

1966: The shaft was deepened to 2,260 feet.

1968: The No. 1 mine and mill were reopened. Production from the New Quirke Mine began.

1973: Total underground development amounted to 99,995 feet of drifts and 13,194 feet of crosscuts. Diamond drilling from 1968 to 1973 included 7,261 underground drill holes totalling 104,260 feet and 10 surface drill holes totalling 8,237 feet.

1974: Expansion program was initiated. The mill rate was to increase to 7,000 tons per day to be completed in 1978.

1976: The mine expanded to the "A" Reef to the west of the New Quirke shaft. The milling rate was up to 6,350 tons of ore a day. The Quirke No. 1 mine was dewatered and the mine waters leached. Plans included using the Quirke No. 1 mine as a ventilation shaft.

1978: Production came from the New Quirke "C" and "A" Reefs.

1979: The Quirke mill capacity was up to 7,004 tons ore per day. The average recovery rate per ton was 2.3 pounds U_3O_8.

1980: Production declined due to lower grades.

Principal References:

Blackburn, C.E.
1981: Kenora-Fort Frances and Rainy River Districts; Ontario Geological Survey, Geological Compilation Series Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Mineral Resources Branch, Department of Energy, Mines and Resources, Ottawa File 41J/10 U3, Quirke No. 2(New Quirke) May 1973.

Rio Algom Mines Limited (1972): "Uranium from Elliot Lake". Booklet published by Corporate Public Relations Department of Rio Algom Mines Limited.

Rio Algom Company Annual Reports.

Robertson,J.A.
1968: Quirke No.2 Mine;p. 118,121, in Geology of Township 149 and Township 150,; Ontario Department of Mines, Geological Report No. 57,162p. Accomapnied by Maps 2113 and 2114, scale 1:253,440 or 1 inch to 4 miles. Charts A,B,C,D, and E.

1976: The Blind River Uranium Deposits: The Ores and Their Settings; Ontario Divivsion of Mines Miscellaneous Paper 65, 45p.

1981: The Uranium Deposits of Ontario - Their Distribution and Classification; Ontario Geological Survey Miscellaneous Paper 86, 37p.

Rio Algom Limited

Spanish American Mine

Commodity:

Uranium

Radioactive Minerals:

Brannerite and monazite.

Location:

Latitude 46° 28' 37" N Longitude 82° 35' 16" W
Bouck Township
Map Reference: ODM Map 2114

Geology:

The Spanish American property is underlain by sparse conglomerates and feldspathic quartzites of the Gowganda Formation except for a narrow strip along the shore of Quirke Lake where white-to-pink rocks of the Serpent Formation is exposed. Also present is a northwest striking linement partly filled with Nipissing diabase that marks the steeply-dipping Spanish American fault.

The ore zone is a conglomerate zone up to twenty feet thick with an average of 10 feet of ore grade. The body strikes N 70° W , dips 17° S and is 2,100 feet long by 400 feet wide.

The conglomerate consists of closely packed, subrounded quartz pebbles and cobbles in a matrix containing pyrite, hematite, magnetite, and zircon.

The thorium to uranium ratio is approximately 3 to 1.

Economic Features:

As of December 1958, reserves were estimated at 5,735,000 tons grading 1.94% U_3O_8 (allowing 10% dilution with barren material).
Production in 1959 was 42,341 tons. (Robertson, 1968b.)

History of Development:

1953: The 36 claim property was staked by P. westfield. Two diamond drill holes were drilled by Kinloch Mining Company Limited.

1953-1959: Spanish American Mines Limited drilled 12 holes all of which intersected uranium-bearing zones. This drilling indicated about 6,000,000 tons grading 0.10% U_3O_8.
Spanish American Mines Limited was incorporated into Northspan Uranium Mines Limited in 1956. No. 1 and2 shafts were completed to 3,476 feet and 3,163 feet. A level was established at a depth of 3,100 feet on which 7,056 feet of drifting and 4,286 feet of crosscutting were completed by February 1959. The mine was closed in February 1959 due to severe ground conditions.
From 1956 to 1959 diamond drilling included 33 surface holes totalling 4,276 feet and 432 underground holes totalling 14,833 feet.

1961: Northspan amalgamated with three other companies to form Rio Algom Limited.

Principal References:

Griffith, J.W.
1967: Spanish American Mine; p. 173-175, in The Uranium Industry - Its History, Technology, and Prospects, Mineral Resources Division, Department of Energy, Mines and Resources, Ottawa, Mineral Report No. 12, 335p.

Robertson, J.A.
1968a: Rio Algom Mines Limited; p.44, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

1968b: The Spanish American Mine; p. 122, in Township 149 and Township 150; Ontario Department of Mines, Geological Report No. 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to ½ mile. Charts A, B,C,D, and E.

Mineral Resouces Branch, Deparment of Energy, Mines and Resources Ottawa, File 41/J U 47, Spanish American Mine, May 1975.

OGS, AFRO, Toronto - SMDR File 000110.

Denison Mines Limited

Can-Met Mine

Commodity:

Uranium

Radioactive Minerals:

Brannerite, monazite, and uraninite

Location:

Latitude 46°28'51"N Longitude 82°32'54"W
Buckles Township
Map Reference: ODM Map 2002

Geology:

The Can-Met deposit is located on the north limb of the Quirke Syncline. The orebody which consists of two beds of uraniferous quartz-pebble conglomerate, is in one of the fringe areas of the major ore shoot, located on the north side of the Quirke Lake Trough.

A major easterly striking, high angle reverse fault, a large 100 feet thick dike and many minor normal and reverse faults transect the orebody.

Large pockets of pyrrhotite, pyrite, and some chalcopyrite have been found. The average depth of the ore zone is 1750 feet and occurs in an area 1,400 feet by 1,800 feet. The average strike is N40°W, with dips ranging between 0 and 15°S. The average thickness of the ore is 17 feet, but widths of up to 25 feet have been encountered.

Two shafts about 500 feet apart were sunk to depths of 2,127 and 2,395 feet respectively. (Mineral Resources Division, 1967, MR 12, p.98-101).

Economic Features:

Partly proven ore is estimated at 6,642,380 lb. of U_3O_8 at 0.092% U_3O_8.

History of Development:

1954 - 1960: Can-Met Explorations Limited did the following development work:

Two shafts were sunk 2,127 and 2,395 feet respectively. Shaft No. 1, a two compartment service and ventiliation shaft with station at 2,089 feet. Shaft No. 2, a three compartment production shaft with a station at 2,080 feet.

Total diamond drilling consists of 11 holes totalling 24,426 feet and 68 holes from underground totalling 11,302 feet. Total accumulated footage consisted of drifting 32,389 feet and crosscutting 2,591 feet.

In 1960, Can-Met Explorations Limited amalgamated with other companies to form Denison Mines Limited. In this year, operations ceased.

1978: Dewatering of the Can-Met mine was begun.

1979: Can-Met Shaft No. 1 was enlarged and used as a ventilation shaft for the Stanrock Mine.

Principal References:

Griffith, J.W.
1967: Can-Met Explorations Limited; p.98-101, in the Uranium Industry - Its History, Technology and Prospects, Canada Department of Energy, Mines and Resources, Mineral Division Report No. 12, 335p.

Robertson, J.A.
1961: Can-Met Explorations Limited; p.48, in Geology of Townships 143 and 144, ODM, GR No. 4, 65p. Accompanied by Maps 2001 and 2002, scale 1 inch to 1/4 mile. Charts A,B,C, and D.

1968: Denison Mines Limited (Can-Met Mine); p.31-32, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Survey of Mines, Can-Met Explorations Limited, in Financial Post Survey of Mines, published by MacLean Hunter Publishing Company Limited, 1959.

Rio Algom Limited

Conecho Mines Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Brannerite, uraninite, and monazite.

Location:

Latitude 46° 29' 09" N Longitude 82° 31' 16" W
Buckles Township
Map Reference: ODM Map 2002

Geology:

Surface exposures show the Mississagi Formation of the Hough Lake Group and a thick diabase sill intruding the Mississagi Formation bwteen Quirke and Teesdale Lakes.

Drilling intersected uraniferous oligomictic conglomerate bands.

Economic Features:

Drilling indicated a minimum of 2,000,000 tons of material averaging 0.07% U_3O_8 across an average width of 6 feet.

History of Development:

1953: Airborne magnetometer and scintillometer survey was completed by Technical Mine Consultants Limited.

1954-1955: Twenty drill holes totalling 13,273 feet located on the northeast shore of Teasdale Lake were drilled by Conecho Mines Limited.

1975: Conecho Mines Limited amalgamted with Rio Algom Limited.

1980: This property is now considered part of the Panel property.

Principal References:

Robertson, J.A.
1957: Township 144, District of Algoma, Ontario; Ontario Department of Mines Map 2002, scale 1:15,840 or 1 inch to ¼ mile.

1968: Rio Algom Mines Limited (Conecho Property); p. 33, *in* Uranium and Thorium Deposits of Northern Ontario, ODM,MRC. No. 9, 106p.

OGS, AFRO, Toronto - Buckles Township, Drill Log Report No.11, Conecho Mines Limited, 1954.
- Technical File No. 63.419, Technical Mine Consultants Limited, 1953.
- SMDR File No. 000091.

Rio Algom Limited

Panel Mine

Comoodity:

Uranium and thorium.

Radioactive Minerals:

Brannerite, uraninite, and monazite.

Location:

Latitude 46° 29' 54" N Longitude 82° 33' 00" W
Buckles Township
Map Reference: OGS Map 2419

Geology:

The Panel orebody underlying Quirke Lake is on the north limb of the Quirke Lake Syncline. The ore-bearing zone is a quartz-pebble conglomerate of the Matinenda Formation of the Elliot Lake Group. In the northern part of the mine, the orebody is the thickest. The grade becomes richer to the west and some narrow sections of very high grade ore have been reported. Some assays show 0.85% U_3O_8 per ton.

The main ore zone varying in thickness form 6 to 32 feet and averaging 12 feet, strikes N 75° W and dips 14° S. The depths at which the ore is intersected ranged from 1,100 to 1,700 feet. Locally there is high concentrations of thorium.

Economic Features:

According to the Ontario Department of Mines and Northern Affairs statistical records total ore milled amounted to 3,628,157 tons containing 15,170,826 pounds of U_3O_8 up to 1960. Average assays from nine drill holes show 0.10% U_3O_8 over 13.8 feet.

History of Developments:

1953: Airborne magnetometer and scintillometer surveys were completed by Technical Mine Consultants Limited.

1956-1959: Northspan Uranium Mines Limited was responsible for the work carried on during this time.
Two shafts about 1,900 feet apart were sunk to depths of 1,836 and 1,250 feet.The mine was developed on 12 levels.
Production first began in 1958 and the mill reached a capacity of 3,000 tons of ore per day in August of 1958.

Total diamond drilling consisted of 26 holes for 23,792 feet from the surface and 1,037 holes underground totalling 35,208 feet. Total footage during underground development consisted of 29,587 feet of drifts and 19,231 feet of crosscuts.

1960-1961: Northspan amalgamated with other companies to form Rio Algom Limited.
In 1961 the Panel Mine was closed.

1977: The Panel Mine was part of Rio Algom's Phase 2 expansion. The mine was reactivated. The mill rate was 2,990 tonnes per day.

1979: Commenced commercial production in November averaging 2,419 tons of ore per day with an average grade of 1.2 pounds U_3O_8 per ton. A total of 394,000 pounds of U_3O_8 were produced. (Rio Algom Company Annual Report 1980)

Principal References:

Lang, A.H., Griffith, J.W., and Steacy, H.R.
1962: Panel Mine; p.141, in Canadian Deposits of Uranium and Thorium, Geol. Surv. of Canada, Econ. Geol. Ser. No. 16 (Second Edition), 324p.

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Griffith, J.W.
1967: Panel Mine; p. 152-162, in The Uranium Industry-Its History, Technology, and Prospects; Canada Department of Energy,Mines and Resources, Ottawa, Mineral Report No. 12, 335 p.

Rio Algom Limited, Company Annual Reports.

Robertson, J.A.
1968: Rio Algom Mines Limited, Panel Mine; p. 33-34, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9,106p.

Western Miner,Panel Consolidated in Western Miner, Vol.29, No.7, July 1956, p. 139, published by Gordon Black Publications Limited, 1956.

OGS, AFRO, Toronto - Technical File No. 63.419, Technical Mine Consultants Limited, 1953.
- SMDR File No. 000094.

OMNR Sault Ste. Marie Regional Geologists Files - SSM 561, SSM 376, SSM 712, SSM 1072.

Denison Mines Limited

Roche Long Lac Mines Ltd. Prospect

Commodity:

Uranium, Thorium

Radioactive Minerals:

Brannerite, Uranite, and Monazite.

Location:

Latitude 46°28'34"   Longitude 82°31'28"
Buckles Township
Map Reference: ODM Map 2002

Geology:

Drilling intersected the Espanola Formation at the surface, then through the Bruce, Mississagi, Pecors, Ramsay Lake and Matinenda Formations, to the Early Precambrian granite at 1850 to 2467 feet.

Economic Features:

Average assay results from the uraniferous oligomictic conglomerate intersected in three drill holes were 0.06% U_3O_8 over a core length of 5.6 feet. (ODM, 1973, OFR 5093, Vol.2 and MDS, Ottawa File N9, 41/J/7 Jan. 1968).

In Nov. 1967 reserves were estimated at 1.6 million tons grading 0.07% U_3O_8.

History of Development:

1954-55: Geological survey and seven drill holes totalling 12,465 feet. Work by Roche Long Lac Mines Limited. Later, name changed to North Rock Explorations Limited.

1967: Stanrock Uranium Mines Limited acquired a majority of shares.

1973: Amalgamated with Denison Mines Limited.

Principal References:

Leahy, E.J.
1973: Diamond Drilling in the Huronian Supergroup, Sault Ste. Marie - Elliot Lake Area, Volume 1: Summary of Diamond Drilling with Abstracts of Selected Drill Holes (accompanied by Vol.2, Atlas of Maps showing locations of drilling): Ontario Division of Mines, OFR 5093.

Mineral Development Section, Department of Energy, Mines and Resources, Ottawa, National Mineral Inventory File U9, 41J/7, North Rock, January, 1968.

Robertson, J.A.
1961: Roche Mines Limited; p.54 in Geology of Townships 143 and 144, Ontario Department of Mines, Geological Report No.4, 65p. Accompanied by maps 2001 and 2002 scale 1 inch to 1/4 mile.

1968: North Rock Exploration Limited; p.32 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

ODM, AFRO, Toronto - Technical File No. 63A.232, Roche Long Lac Mines Limited, 1954
- SMDR File No. 000093

Dension Mines Limited

(Roman Island Occurrence)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 29' 17" N Longitude 82° 34' 20" W
Buckles Township
Map Reference: ODM Map 2002

Geology:

One drill hole intersected uraniferous oligomictic conglomerate of the Matinenda Formation of the Elliot Lake Group.

Economic Features:

Assays of samples taken range from 0.01 to 0.36% U_3O_8. (ODM, OFR 5093, 1973, Vol. 2)

History of Development:

1955: One drill hole to 1,950 feet. Work by Consolidated Dension Mines Limited.

1960: Amalgamated with Denison Mines Limited.

Principal References:

Leahy, E.J.
1973: Diamond drilling in the Huronian Supergroup, Sault Ste. Marie - Elliot Lake Area Volume 1 : Summary of Diamond Drilling with Abstracts of Selected Drill Holes (Accompanied by Vol. 2 , Atlas of Maps Showing Locations of Drilling): Ontario Division of Mines, OFR 5093.

Robertson, J.A.
1968: Roman Island; p. 18, 20, *in* Geology of Townships 143 and 144; Ontario Department of Mines, Geological Report No. 4, 65p. Accompanied by Maps 2001 and 2002, scale 1 inch to ¼ mile. Charts A,B,C, and D.

Denison Mines Limited
Stanrock Mine

Commodity:

Uranium and yttrium.

Radioactive Minerals:

Uraninite, brannerite, monazite, and thucholite.

Location:

Latitude 46° 28' 19" N Longitude 82° 33' 41" W
Buckles Township
Map Reference: ODM Map 2002

Geology:

The Stanrock orebody strikes northwest and dips an average of 17° to the southwest. The ore minerals are associated with pyrite in the matirx of the quartz-pebble conglomerate of the Matinenda Formation of the Elliot Lake Group.
The orebody is displaced by a major thrust fault, which strikes northwest and dips 15° south. The dip slip is approximately 1,200 feet and the strike slip is approximately 300 feet. The resulting duplication of the orebody adds considerably to the ore potential along a broad band paralleling the fault. One major diabase dike 80 feet thick strike east-west across the property and cut nearly vertically through the ore zone. The ore was intersected at a depth of 3,200 feet in the No. 1 shaft and about 2,700 feet in the No. 2 shaft. The orebeds found average 6 feet in thickness.

Economic Features:

From 1958 to July 1964 6,446,800 tons of ore were milled, producing 11,402,736 pounds of U_3O_8 at an average of 1.88 pounds per ton.

As of December 1968, estimated reserves were approximately 10,000,000 tons assured and probable averaging about 1.5 pounds U_3O_8 per ton. (Finanical Post Survey of Mines)

History of Development:

1955: Diamond drilling was completed by Stancan Uranium Mines Limited.

1956-1970: Stanrock Uranium Mines Limited completed the following work;
Two shafts were sunk 797 feet apart. The main three-compartment production shaft was lengthened to 3,379 feet and a two-compartment service shaft to 2,953 feet. Main levels were established at 3,277 and 2,909 feet.
In 1958 a mill to handle 3,300 tons per day went into operation.
Conventional mining ceased in October 1964. Thereafter production came from leaching.
In 1965 yttrium oxide was produced.
In April 1970 operations were suspended. Total diamond drilling consisted of 15 holes from the surface totalling 40,417 feet and 4,668 holes underground totalling 50,119 feet.
Total development in the mine was 114,045 feet of drifts and 2,861 feet of crosscuts.

1973: Stanrock Uranium Mines Limited amalgamated with Denison Mines Limited.

1978: Dewatering of the mine was begun.

1979: The shafts were improved and deepened.

1981: Underground development was to be completed by 1982.

Principal References:

Robertson, J.A.
1961: Stanrock Uranium Mines Limited; p. 59 in Geology of Townships 143 and 144, ODM Geological Report No. 4, 65p. Accompanied by Maps 2001 and 2002, scale 1 inch to ¼ mile, and Charts A,B,C,and D.

1968: Stanrock Uranium Mines Limited; p. 34-35 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

Survey of Mines (1971) Stanrock Mines Limited; p. 151,in Finanicial Post Survey of Mines, Published by MacLean Hunter Publishing Company Limited.

Western Miner (1956) Stancan Uranium Corporation; p.153-156, in Western Miner Vol. 29, No. 7, July 1956, published by Gordon Black Publications Limited.

OGS, AFRO, Toronto - SMDR File No. 000094.

Cullis Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°17'50"N Longitude 83°24'10"W
Day Township
Map Reference: OGS Map 2419

Geology:

At the southern end of Cullis Lake 7 to 10 m of coarse, pink arkose and subarkose overlies grey subarkose of the Livingston Creek Formation. At the base of the pink arkose is about 50 to 75 cm of quartz-pebble conglomerate which is locally pyritic, particularly near the base. Samples of pyritic conglomerate were weakly radioactive.

Principal References:

Bennett; G.
1976: Huronian Volcanism in the Thessalon Area, District of Algoma; p.111-113, in Summary of Fieldwork, 1976, by the Geological Branch, edited by V.G. Milne, W.R. Cowan, K.D. Card, and J.A. Robertson, Ontario Division of Mines, MP 67, 183p.

Frarey, M.J.
1977: Geology of the Huronian Belt Between Sault Ste. Marie and Blind River; Geological Survey of Canada, Memoir 383.

Giblin, P.E., and Leahy, E.J.
1979: Sault Ste. Marie- Elliot Lake; Algoma, Manitoulin, and Sudbury Districts, OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Corner Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°26'30"N Longitude 82°25'58"W
Gaiashk Township
Map Reference: ODM Map 2003

Geology:

A deep drill hole intersected the Huronian Sequence from the Gowganda Formation at the surface through the Serpent, Espanola, Bruce, Mississagi, Pecors, Ramsay Lake and Matinenda Formations to the Early Precambrian basement.

Radioactive sections of quartz pebbles with minor sulphides were intersected.

History of Development:

1967 - 1968: Combined airborne magnetic and electromagnetic surveys and two drill holes totalling 6,359 feet were performed by Cominco Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1962: Corner Lake; p.45, in Geology of Townships 137 and 138, ODM, GR No. 10, 94p. Accompanied by Maps 2003 and 2004, scale 1 inch to 1/4 mile.

Shklanka, R.
1969: Corner Lake; p.88, in Copper, Nickel, Lead, and Zinc Deposits of Ontario, ODM, MRC No. 12, 394p.

OGS, AFRO, Toronto - Gaiashk Township, Drill Log Report No. 38, Gulf Minerals, 1968.
- Technical File No. 63.2171, Cominco Limited, 1967.
- SMDR File No. 000025.

Iso Mines Limited Occurrence

(Whiskey Zone)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 23' 13" N Longitde 82° 24' 35" W
Gaiashk Township
Map Reference: ODM Map 2003

Geology:

This occurrence is underlain by Middle Precambrian Huronian metasediments. Uranium mineralization occurs in thin sections of pyritiferous, uraniferous, oligomicitic conglomerate of the Matinenda Formation.

Economic Features:

One drill hole gav average assays of 0.013%U_3O_8 over 2.3 feet. (OGS, AFRO, Toronto - Gaiashk Tp., Drill Log Report No. 40,1968.)

History of Development:

1953-1957: Geological, airborne magnetometer and radiometric surveys, and nine drill holes were drilled by Algom Uranium Mines Limited.

1968: Two drill holes totalling 943 feet on claim S140707 were drilled by Iso Mines Limited.

1974: An airborne magnetometer survey was completed by North American Nuclear Limited.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geoligcal Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Gaiashk Township, Drill Log Report No. 13, Preston East Dome Mines Limited, 1953.
- Technical File No. 63.441, Algom Uranium Mines Limited, 1953.
- Gaiashk Township, Drill Log Report No. 40 Iso Mines Limited, 1968.
- Technical File No. 2.1783, North American Nuclear Limited, 1974.

Pecors Lake East Prospect

(Whiskey Zone)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 22' 46' N Longitude 82° 25' 26"W
Gaiashk Township
Map Reference: ODM Map 2003

Geology:

Uranium mineralization is located in the quartz-pebble conglomerate and arkose of the Matinenda Formation of the Elliot Lake Group. The Matinenda Formation is intruded by a Nipissing diabase sill and the outcrop is repeated by a thrust fault on the hanging wall of the sill. The conglomerate is restricted to an old stream channel. (ODM, MRC No. 9, 1968)

Economic Features:

Shallow exploration and assesment drilling was carried out on two surface exposures of radioactive quartz-pebble conglomerate found on claim S67641 and S64478-64479 (Claim Map M1212 Gaiashk Township) The drilling delineated a very low grade,narrow conglomerate zone, which averaged 4.5 feet in thickness with a strike length of about 1,300 feet and has an average grade of 0.05% U_3O_8. (ODM, MRC No. 9, 1968)

History of Development:

1953-1957: Geological, airborne magnetometer surveys were carried out. Four drill holes totalling 15,873 feet were drilled by Algom Uranium Mines Limited.

1974: An airborne magnetometer survey was carried out by North American Nuclear Limited.

Principal References:

Robertson, J.A.
1968: Algom Uranium Mines Limited; p. 62-63, in Geology of Townships 137 and 138, Ontario Department of Mines, Geological Report No. 10, 94p. Accompanied by Maps 2003 and 2004, scale 1 inch to ¼ mile.

OGS, AFRO, Toronto - Technical File No. 63.441, Algom Uranium Mines Limited, 1953.
- SMDR File No. 000083.

Whiskey Prospect

(Whiskey Zone)

Commodity:

Uranium

Radioactive Minerals:

Brannerite, uraninite, and monazite.

Location:

Latitue 46° 24' 00" N Longitude 82° 20' 50" W
Gaiashk Township
Map Reference: ODM Map 2003

Geology:

The uranium mineralization occurs in the Matinenda Formation in the thin beds and lenses of oligomicitc conglomerate within arkose quartzite.

Economic Features:

Samples from one drill hole assayed 0.036% over 0.9 feet. Another drill hole drilled by Grand Chibougamau Mines Limited gave an assay of 0.03% U_3O_8 over a 10 foot width. (ODM, 1962, GR 10, p. 78)

History of Development:

1954: One drill hole to 180 feet was drilled by British Columbia Explorers Limited.

One drill hole to 133 feet was drilled by Grand Chibougamau Mines Limited.

1955: One drill hole drilled to 553 feet was drilled by Panel Consolidated Uranium Mines Limited.

Principal References:

Robertson, J.A.
1962: British Columbia Explorers (1953) Limited, Drill Holes B.W. 2, C.F. 1, and B.W.1; p. 73, in Geology of Townships 137 and 138, Ontario Department of Mines, Geological Report No. 10, 94p. Accompanied by Maps 2003 and 2004, scale 1 inch to ½ mile.

1968: Whiskey Zone; p. 28-29, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Gaiashk Township, Drill Log Report No. 25, British Columbia Explorers Limited, 1954.
- Gaiashk Township, Drill Log Report No. 30, Panel Consolidated Mines Limited, 1955.
- SMDR File No. 000079.

Soo-Tomic Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°28'33"N Longitude 84°49'20"W
Giles Township
Map Reference: OGS Map 2419

Geology:

Radioactive mineralization occurs in a brecciated zone at the contact and in a Keweenawan diabase dike cutting an Early Precambrian granite-pegmatite complex.

The breccia zone was traced for 80 feet along the footwall and averaged five inches in width. A parallel zone four feet away is six inches wide and was traced for 60 feet.

Economic Features:

Samples from this deposit sent by J.G. McCombe assayed 1.62% U_3O_8 (radiometric equivalent) and up to 0.56% U_3O_8 (chemical). Samples sent by W. Jenks showed up to 7.30% U_3O_8.

History of Development:

Pre 1950: Sampling and prospected by J.G. McCombe.

1951: Soo-Tomic Uranium Mines Limited drilled 21 shallow holes totalling 671 feet.

1975: This occurrence is now within Lake Superior Provincial Park.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Districts of Algoma, Manitoulin, and Sudbury; OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: J.G. McCombe; p.124, in Canadian Deposits of Uranium and Thorium (Interim Account), GSC, Economic Geology Series No. 16, 173p.

Robertson, J.A.
  1968: Soo-Tomic Uranium Mines Limited-Baldhead River
        Occurrence; p.27, in Uranium and Thorium Deposits of
        Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000077.
                   - Drill Log Report, Soo-Tomic Uranium Mines
                     Limited, 1951.

R.B. Phillips Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude $47^{\circ}27'00''$N Longitude $84^{\circ}32'00''$W
Greenwood Township
Map Reference: OGS Map 2419

Geology:

The radioactive samples were taken from pegmatites within the Early Precambrian basement. The basement is cut by a northwest-trending Keweenawan diabase dike.

Economic Features:

Two samples from this deposit assayed 0.025 and 0.68% U_3O_8 (radiometric equivalent).

History of Development:

Pre 1952: Some prospecting and sampling by R.B. Phillips.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Phillips Occurrence; p.132, in Canadian Deposits of Uranium and Thorium (Interim Account), GSC, EGS No. 16, 173p.

Robertson, J.A.
1968: R.B. Phillips Occurrence; p.53, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000060.

Rio Algom Limited

Buckles Mine

Commodity:

Uranium

Radioactive Minerals:

Brannerite, uraninite, monazite

Location:

Latitude 46°22'34"N Longitude 82°35'20"W
Gunterman Township
Map Reference: OGS Map 2419

Geology:

The orebody is the up-dip section of the Algom-Nordic Ore horizon. The ore-bearing zone is composed of two quartz-pebble conglomerate beds. The lower bed rests on the older basement rocks; the upper bed is approximately 20 feet above the lower bed.

The ore outcrops along the southern limits of the property and is indicated at a depth of 210 feet at the northern extremity.

The orebody dips 25° to the west for 4,000 feet.

Economic Features:

In 1955 diamond drilling estimated reserves at 486,000 tons averaging 0.12% U_3O_8 in a zone averaging 10 feet in thickness MDS, DEMR 1967, MR 12, p.125). Production in 1958 when the mine closed was 124,890 tons U_3O_8. (Robertson, 1968, p.113).

History of Development:

1953: Airborne scintillometer and magnetometer surveys were performed by Technical Line Consultants Limited.

1954 - 1955: Geological mapping and 34 drill holes totalling 3,224 feet and an exploratory draft to 77 feet were undertaken by Buckles Algoma Uranium Mines Limited.

1956: Claim group acquired by Spanish American Mines Limited.

1956: Spanish American amalgomated with other to form Northspan Uranium Mines Limited.

1956 - 1958: Northspan Uranium Mines Limited did the following development work:
The mine was opened by a three-compartment vertical shaft sunk 239 feet with levels at 160 and 211 feet. (MDC, DEMR, 1967, MR 12, p.125).
The ore was milled at the Spanish American Mine and mostly at the Lacna mill. Approximately 250,000 tons of ore was mined before October 1958 when the mine was sealed.
Total diamond drilling consisted of one hole from the surface for 120 feet and three underground for 91 feet. Total footage during underground development consisted of 2,730 feet of drifting and 462 feet of crosscutting.

1960: Northspan Uranium Mines Limited amalgamated to form Rio Algom Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1974-76: Sault Ste. Marie-Elliot Lake Geological Compilation Series, OGS, Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Griffith, J.W.
1967: Buckles Mine; p.126, The Uranium Industry - Its History, Technology and Prospects, Mineral Resources Division, Mineral Report No. 12, Department of Energy, Mines and Resources, Ottawa, 335p.

Robertson, J.A.
1968: Buckles; p.113, in Geology of Township 149 and Township 150, ODM, Geological Report 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to 1/4 miles. Charts A,B,C,D, and E.

1968: Buckles Mine, Buckles Algoma Uranium Mines Limited; p.36, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Sault Ste. Marie Files SSM 366.

Crotch Lake Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°25'10"N Longitude 82°36'34"W
Gunterman Township
Map Reference: OGS Map 2419

Geology:

One drill hole intersected the Huronian sequence from the Gowganda Formation at the surface through the Serpent, Espanola, Bruce, Mississagi, Pecors, Ramsay Lake and Matinenda Formations to the Early Precambrian basement at 3,819 feet.

Economic Features:

The uraniferous oligomictic conglomerate bands of the Matinenda Formation gave an average assay value of 0.02% U_3O_8 and 0.034% Th_2 over 1.2 feet.

History of Development:

1965 - 1967: Two drill holes to 490 and 3,833 feet respectively drilled by Rio Tinto Canadian Exploration Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts, OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Leahy, E.J.
1973: Township 149; p. *in* Diamond Drilling in the Huronian Supergroup, Sault Ste. Marie-Elliot Lake Area, ODM, OFR 5093, Vol. 2,

OGS, AFRO, Toronto - SMDR File No. 001118.

Genex Mines Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°22'31"N Longitude 82°35'54"W
Gunterman Township
Map Reference: OGS Map 2419

Geology:

A narrow strip of Matinenda quartzite with uraniferous conglomerate lies along the north edge of claim SSM 396273. These beds dip north at 15 - 20° and rest on the Early Precambrian basement. Six drill holes intersected one or more radioactive conglomerate beds.

Economic Features:

The main ore bed was six and one-half feet thick. There is approximately 10,000 - 11,000 tons of material of ore grade indicated.

History of Development:

1954 - 1955:	Geneva Lake Mines Limited performed surface mapping and 12 drill holes totalling 2,222 feet.
1957:	16 drill holes totalling 664 feet on the north shore of Nordic Lake were drilled by Genex Mines Limited.
1958:	Claims sold to Chipman Lake Mines Limited.
1976:	Claim SSM 396273 held by R. MacGregor of Sault Ste. Marie.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Genex Mines Limited; p.40, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto
- Gunterman Township, Drill Log Report No. 12, Geneva Lake Mines, 1954.
- Gunterman Township, Drill Log Report No. 33, Genex Mines, 1957.
- Technical File No. 63A.242, Geneva Lake Mines Limited, 1955.
- SMDR File No. 000096.

Kamis Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°24'35"N Longitude 82°40'45"W
Gunterman Township
Map Reference: ODM Map 2113

Geology:

Sedimentary rocks of the Hough Lake Group strike east-west and dip north at 10 to 30°. The northwest-striking Home Lake fault crosses the area.

Economic Features:

In one hole the average assay was 0.03% U_3O_8 over three feet. In another, assay values were 0.07% U_3O_8 and 0.03% Th, over 1.0 foot.

History of Development:

1955 - 1956: Geological survey and two drill holes for 6,205 feet were performed by Kamis Copper Mines Ltd.

1965 - 1966: Rio Tinto Canadian Exploration Ltd. drilled two holes for 4,494 feet.

Principal References:

Robertson, J.A.
1968a: Rio Tinto Canadian Exploration Limited; p.40-41, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

1968b: Kamis Uranium Mines Limited; p.111,136,143, in Township 149 and Township 150, ODM, GR No. 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to 1/4 mile. Charts A,B,C,D, and E.

OGS, AFRO, Toronto - Gunterman Township, Drill Log Report No. 15, Kamis Copper Mines Limited, 1956.
- Gunterman Township, Drill Log Report No. 34, Rio Tinto Canadian Exploration Limited, 1965.
- Gunterman Township, Drill Log Report No. 35, Rio Tinto Canadian Exploration Limited, 1966.
- Technical File No. 63A.292, Kamis Uranium Mines Limited, 1955.
- SMDR File No. 000097.

Lacnor Mine (Past Producer)

Commodity:

Uranium

Radioactive Minerals:

Brannerite and uraninite

Location:

Latitude 46°23'44"N Longitude 82°36'31"W
Gunterman Township
Map Reference: OGS Map 2419

Geology:

The surface exposure is Mississagi quartzite of the Hough Lake Group dipping 20° N. The Nordic diabase sill-like intrusion lies to the north and is cut by northwest-striking dikes and a fault.

The Lacnor deposit is on the south limb of the Quirke Lake Syncline. The ore bed consists of uraniferous quartz-pebble conglomerate.

Two principal beds of conglomerate ore were found. The average thickness of the upper being 11 feet and the lower 12 feet. They are separated by a 14-foot bed of pebbly quartzite that is radioactive but not of ore grade. The strata strike was about N 70° E and dipped about 18° N. The east-west ore width indicated by drilling is approximately 3,300 feet. The conglomerate consists of quartz pebble in a matrix of feldspathic quartzite, well mineralized with pyrite (5 to 15%) and frequently containing a little chalcopyrite.

Two shafts about 384 feet apart were sunk to depths of 3,663 and 3,380 feet. They were connected at 2,550 feet.

Economic Features:

Figures disclosed by diamond drilling indicated 5,202,054 tons of ore grading 0.111% U_3O_8.

History of Development:

1954 - 1956: 19 drill holes totalling 44,179 feet were drilled.

1956 - 1960: Northspan Uranium Mines Limited did the following development work:

Two vertical, four compartment shafts were sunk in 1956. No. 1 production shaft to 2,394 feet with shaft stations 500, 1000, 1500, 2000, and 2300 feet. No. 2 service shaft is 2,512 feet deep with stations at 84, 500, 1000, 1500, 2000, 2300, and 2400 feet.

In 1959, No. 1 shaft was extended to 3,510 feet with eight new levels at 2,638, 2,715, 2,785, 2,855, 2,925, 3,065, and 3,135 feet. No. 2 shaft was extended to 2,970 feet with five new levels at 2,637, 2,714, 2,784, 2,854, and 2,924 feet.

In 1960, No. 1 shaft was extended to 3,663 feet and No. 2 to 3,380 feet. A mill to handle 3,922 tons per day went into operation in September 1957. By March 1958, the milling rate reached 3,77 tons per day. The mine was closed in 1960 and allowed to flood.

Up to its 1960 closing, the mine had been developed on 16 levels. Total diamond drilling consisted of 123 holes from underground totalling 6,112 feet and 50,993 feet of test-hole drilling from underground. Total footage underground consisted of 51,204 feet of drifting and 11,976 feet of crosscutting.

1960 - 1964: During 1964, mine waters were bled off through the Milliken Mine and the dissolved uranium was recovered. In July 1964, prior to the closing of the Milliken Mine, a raise was driven into the Lacnor workings above the water level. Work by Rio Algom Mines Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
Rio Algom Mines Limited, Lacnor Mine; p.81,113-114, 116, in Geology of Township 149 and Township 150, ODM, GR 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to 1/4 mile. Charts A-E.

Rio Algom Limited

Milliken Mine

Commodity:

Uranium

Radioactive Minerals:

Brannerite and uraninite.

Location:

Latitude 46° 24' 09" N Longitude 82° 37' 31" W
Gunterman Township
Map Reference: ODM Map 2113

Geology:

The surface geology shows the Missisagi quartzites of the Hough Lake Group dipping about 20° N. The Nordic diabase sill-like intrusion joins high ground east and north of the mine site.
The Milliken Lake orebody is on the south limb of the Quirke Lake trough and is considered to by an extension of the Nordic and Lacnor beds. The ore zone is a quartz-pebble conglomerate of the Matinenda Formation.

Economic Features:

The production shaft 3,4000 feet deep intersected 2 ore beds which are separated by 5 feet of quartzite at a depth of 3,008 feet. The upper bed averaged 7 feet in thickness and contained 0.07% U_3O_8. The lower bed was 12 feet thick and averaged 0.12% U_3O_8.

The service shaft 3,071 feet deep intersected the upper ore bed at 2,892 feet where it assayed 0.18% U_3O_8 over 7.5 feet. The lower bed (separated from the upper by 2 feet of quartzite) was 6.6 feet thick and assay values were 0.14% U_3O_8. The

The strike of the orebeds is N 70° W and the dip is 10 to 14°N. (GSC, 1962, Econ. Geol. Ser. No. 16, p. 139)

Up to 1964 14,204,530 pounds of U_3O_8 were produced from 6,325,960 tons of ore milled. (ODM Annual Reports, 1958 to 1965)

History of Development:

1954: Sixteen diamond drill holes totalling 45,210 feet and two shafts 550 feet apart and 300 feet deep were drilled by Milliken Lake Uranium Mines Limited.

1956-1965: The Rio Tinto Group took over in 1956. The shafts were extended to 3,071 and 3,400 feet. Mill construction was completed in March 1958. Plant capacity was 3,200 tons of ore a day. The output of uranium concentrates was about 200,000 pounds per month.

Operations at the Milliken Mine ceased on June 30, 1964. An unsuccessful water leaching program was terminated the next year yeild only 80,000 pounds of U_3O_8.

During its operation the mine was developed on nine levels. Total diamond drilling consisted of 10,468 holes from underground totalling 134,301 feet. Total footage of underground development consisted of 48,215 feet of drifting and 8,776 feet of crosscutting.

1975: This property was taken over by Rio Algom Limited.

1976: Rio Algom Limited planned to dewater the mine and widen the shafts.

Principal References:

Canadian Mining Journal (1976); Rio Algom Limited, in The Canadian Mining Journal, October 1976, p. 17.

Griffith, J.W.
1967: Milliken Mine; p. 130-137, in The Uranium Industry; Its History, Technology, and Prospects; Department of Energy, Mines and Resources, Mineral Resources Division; Mineral Report No. 12, 335p.

Lang, A.H., Griffith, J.W., and Steacy, H.R.
1962: Milliken Lake Mine; p. 139, in Canadian Deposits of Uranium and Thorium, Geol. Surv. Canada, Econ. Geol. Ser. No. 16 (Second Edition), 324p.

Milliken Mine and Rio Algom Limited in Ontario Department of Mines, Annual Reports 1958 through 1965.

Robertson, J.A.
1968: Rio Algom Mines Limited; p.114-117, *in* Geology of Township 149 and Township 150; Ontario Department of Mines Geological Report No.57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to ½ mile. Charts A,B,C,D, and E.

OGS, AFRO, Toronto - SMDR File No. 000099.

Rio Algom Limited

Nordic Mine

Commodity:

Uranium, thorium, and yttrium.

Radioactive Minerals:

Brannerite, pitchblende, uraninite, and thucholite.

Location:

Latitude 46° 22' 48" N Longitude 82° 35' 20" W
Gunterman Township
Map Reference: OGS Map 2419

Geology:

The Nordic ore body is situated in a shallow valley structure on the south limb of the Quirke Lake trough. The Huronian units over which a dip and scarp topography is developed, strike east-west and dip north 10° to 25° E. Approzimately 47,000 feet of diamond drilling in 109 holes have been completed in the upper portion of the orebody wich represents about 20% of the mine's potential. Drill hole spacing averages 250 feet on strike and 450 feet on the dip.

The orebody strikes N 80° E and has an average dip of 17° N. The average thickness is 9.5 feet. The depth of the orebody below the surface is 50 feet in the south and 2,000 feet at the north boundary. The uraniferous conglomerates are confined to the basal 200 feet of the Matinenda Formation of the Elliot Lake Group.

A brief description of conglomerate reefs is as follows;

The basal reef is composed of poorly-sorted quartz pebbles set in an impure quartz matrix. Here grades up to 0.08% U_3O_8 and thicknesses up to 15 feet are found. The nordic reef is the major reef. It consists of fairly well-rounded, well-sorted, densely-packed, quartz pebbles . Another un-named reef occurs 20 feet above the Nordic reef. It has similar composition.

Economic Features:

Reserves as of January 1966 were as follows;

Proven 831,000 tons grading 0.109% U_3O_8,
probable 2,220,000 tons grading 0.103% U_3O_8 and
possible 10,108,000 tons grading 0.106% U_3O_8.

History of Development:

1954-1959: One hundred and nine surface holes totalling 47,000 feet spaced 250 feet along the strike and 450 feet along the dip.
The No.1 shaft went down to 1,331 feet with levels at 230, 330, 425, 515, 605, 712, 775, 894, 971, 1054, 1153, and 1230 feet. The Nordic mill was designed to process 3,400 tons of ore a day and milling commenced in January 1957. Total drifting was 51,897 feet and crosscutting totalled 7,608 feet. Rio Algom Limited completed the work.

1960-1968: In 1961 the Nordic shaft was deepened to 1,780 feet to provide access to 3 new levels where grades were up to 0.12% U_3O_8. By theend of 1961 a small pilot plant was being readied to make nuclear grade ammonium diuranate. A thorium recovery unit with a capacity of 150 to 200 tons a year was constructed.

In 1964 the eastern and western limits of the mine were opened up by both above and underground drilling. Surface drilling indicated the Pardee Reef contained economic reserves.

Production of yttrium concentrates from the waste liquors from the uranium circuit began.

In 1966 a 150 ton per year uranium refinery was completed. The Nordic mill capacity increased to 3,700 tons per day.

In 1968 milling operations ceased.

In 1970 mining operations were being phased out.

Total drilling consisted of 17 holes from the surface totalling 19,447 feet and 25 holes underground totalling 16,042 feet. Total footage during underground development increased to 121,240 feet of drifts and 22,397 feet of crosscuts.

As of 1968 the total number of pounds of U_3O_8 mined was 30,676,782 pounds U_3O_8 from 13,181,780 tons of ore milled.

1981; The Nordic Mine contains substantial uranium resources which may be commerically recoverable.

Principal References:

Airth, M.W. and Olson, E.R.
1958: Algom-Nordic Development to Production; p.666-676, in The Canadian Mining and Metallurgical Bulletin, Vol. 51, No. 559.

Giblin, P.E. amd Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin,and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Griffith, J.W.
1967: Nordic Mine; p. 138-151, in The Uranium Industry, Its History, Technology and Prospects, Department of Energy, Mines and Resources, Ottawa, Mineral Report No. 12, 335p.

Robertson, J.A.
1968a: Rio Algom Mines Limited (Nordic Mine); p.38-39, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

1968b: Nordic Mine; p. 117-120, in Geology of Township 149 and Township 150; Ontario Department of Mines, Geological Report No. 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to ¼ mile. Charts A,B,C,D, and E.

1981: The Uranium Deposits of Ontario - Their Distribution and Classification; Ontario Geological Survey Miscellaneous Paper 86, 37p.

OGS, AFRO, Toronto - SMDR File No. 000100.

Silvermaque Mining Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Probably brannerite, uraninite, and monazite

Location:

Latitude 46°24'32"N Longitude 82°40'10"W
Gunterman Township
Map Reference: ODM Map 2113

Geology:

The southern part of the property is underlain by the Upper Mississagi Formation consisting of grey feldspathic cross-bedded quartzite. The central part is underlain by a Nordic diabase sill-like intrusion.

The northwest-striking Horne Lake fault crosses the south-west part of the property.

Economic Features:

On the basis of drilling, Norsyncomaque Mining Limited estimate ore reserves at 2,500,000 tons grading 0.10% U_3O_8 or 2.2 lbs/ton on the east side of the property and 2,000,000 tons grading 1.08 lbs/ton U_3O_8 contained in the "F" ~~ruf~~ reef.

History of Development:

1955:	Norsyncomaque Mining Limited carried out geological and geophysical surveys.
1965-67:	Silvermaque Mining Limited drilled on the western part of the property.
1976:	This property was optioned to Long Lac Mining and Exploration Limited.
1978:	Long Lac Mining and Exploration Limited carried out diamond drilling.

Principal References:

Canadian Mines Handbook, 1979-80, printed by the Northern Miner Press Limited.

Robertson, J.A.
1968: Silvermaque Mining Limited; p.136, *in* Geology of Township 149 and Township 150, ODM, GR No. 57, 162p. Accompanied by Maps 2113 and 2114, and charts A,B,C, D, and E.

Rio Algom Limited

Stanleigh Mine

Commodity:

Uranium

Radioactive Minerals:

Brannerite, uraninite, and monazite.

Location:

Latitude 46° 24' 35" N Longitude 82° 37' 50" W
Gunterman Township
Map Reference: ODM Map 2113

Geology:

Surface exposures are of sparse conglomerate and minor feldspathic quartzite of the Gowganda Formation cut by northwesterly-tranding and west-trending diabase dikes.

Two beds of ore grade conglomerate each about 10 feet thick are separated by a quartzite bed 5 to 22 feet thick. These beds strike east-west and dip 8 to 10° N.

Two shafts were collared in April 1956. Shaft No. 1 intersected ore at 3,493 feet, while No.2 shaft intersected at 3,639 feet.

Economic Features:

As of the first quarter of 1960, 963,396 tons of ore grading 2.11 pounds U_3O_8 per ton produced 464,741 pounds of U_3O_8.

History of Development:

1956: Two shafts were dug to 3,792 feet and 3,650 feet. Construction of a 3,000 ton per day mill began.

1958: Production included 583,208 tons of ore milled producing 720,531 pounds of U_3O_8 at a grade of 2.07 pounds per ton U_3O_8.

1959: The No.1 shaft was deepened to 3,846 feet. Total production was 949,119 tons of ore milled producing 1,939,097 pounds U_3O_8 at a grade of 2.11 pounds per ton U_3O_8.

1960: Production was 239,311 tons of ore milled producing 464,741 pounds of U_3O_8 at a grade of 2.11 pounds per ton U_3O_8.

Stanleigh Uranium MIning Corporation and Preston East Dome Mines Limited amalgamated to form Preston Mines Limited.

Production ceased in November.

1978: Rehabilitation proceeded at the mine and mill to be completed in 1983.

1980: Rio Algom Limited and Preston Mines Limited amalgamated.

Principal References:

Canadian Mines Handbook 1981-82, Printed by the Northern Miner Press Limited, Toronto, 1981.

Robertson, J.A.
1968: Preston Mines Limited; p. 111-113, in Geology of Township 149 and Township 150, ODM Geological Report No. 57, 162p. Accompanied by Maps 2113 and 2114, scale 1 inch to ¼ mile. Charts A,B,C,D, and E.

M.C. Gardiner Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°52'10"N Longitude 83°35'37"W
Jollineau Township
Map Reference: OGS Map 2419

Geology:

This occurrence lies in the Superior Structural Province and is underlain chiefly by Early Precambrian granite and granite gneiss.

Economic Features:

Assay results from 15 samples ranged from 0.01 to 2.78% U_3O_8 (radiometric equivalent).

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: M.C. Gardiner Occurrence; p.128, *in* Canadian Deposits of Uranium and Thorium (Interim Account), Geological Survey of Canada, Economic Geological Series No. 16, 173p.

OGS, AFRO, Toronto - SMDR File No. 000036.

Abeta Mining Corporation Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°22'43"N Longitude 82°33'50"W
Joubin Township
Map Reference: OGS Map 2419

Geology:

Drilling intersected several radioactive oligomictic conglomerate beds within the Matinenda Formation.

Economic Features:

Assays from samples from two drill holes gave maximum grades of 0.09% U_3O_8 over 5 feet and 0.14% U_3O_8 over 4 feet.

History of Development:

1953 - 1954:	Fifteen drill holes totalling 4,241 feet were drilled by the Mining Corporation of Canada.
1955:	Two drill holes totalling 1,250 feet were drilled by the Abeta Mining Corporation Limited.
1977:	These claims were optioned by Long Lac Mineral Exploration Limited.
1978:	The option was dropped.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979 Sault Ste. Marie-Elliot Lake, Algoma, Manitoulin and Sudbury Districts; OGS, Geological Compilation Series, Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Abeta Mining Corporation; p.47, in Geology of Townships 143 and 144, ODM, GR 4, 65p.

Robertson, J.A.
1968: Pardee Zone; p.29,30, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000081.

Milliqua Mines Limited Prospect
(Pardee Reef of Pardee Zone)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°22'54"N Longitude 82°31'16"W
Joubin Township
Map Reference: ODM Map 2001

Geology:

This prospect is underlain by Middle Precambrian Huronian Metasediments comprising the arkose and conglomerates of the Matinenda Formation of the Elliot Lake Group. The strike is N 70° E and the dip is 15° - 20° N.

Economic Features:

Diamond drilling indicated the presence of 5,390,000 tons of ore averaging 0.07% U_3O_8 at a depth of 1,455 feet.

Assays from two drill holes averaged 0.45% U_3O_8 and 1.83% ThO_2 over 6.7 feet.

History of Development:

1953: Airborne magnetometer and radiometric surveys by Technical Mine Consultants Limited.

1954: Extensive drilling by Pardee Amalgamated Mines Limited. An adit was driven to explore the zone underground.

1954: McIntyre Porcupine Mines Limited drilled 21 holes totalling 5,664 feet.

Principal References:

Robertson, J.A.
1968: Milliqua Mines Limited; p.51-52, in Geology of Townships 143 and 144, ODM, GR No. 4, 65p. Accompanied by Maps 2001 and 2002, scale 1 inch to 1/4 mile and Charts A - D.

OGS, AFRO, Toronto - Joubin Township, Drill Log Report No. 14, Pardee Amalgamated Mines, 1954-1955.
- Technical File No. 63.419, Technical Mine Consultants Limited, 1953.

Nasco Cobalt Silver Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°26'33"N Longitude 82°32'02"W
Joubin Township
Map Reference: ODM Map 2001

Geology:

Three deep diamond drill holes intersected the Huronian sequence from the Serpent Formation at the surface through the Espanola, Bruce, Mississagi, Pecors, Ramsay Lake and Matinenda Formations to the Early Precambrian basement.

Economic Features:

One drill hole intersected several bands of quartz-pebble conglomerate over a thickness of 110 feet.

The best assay was 0.06% U_3O_8 over two feet and wedged section showed 0.04% U_3O_8 over 5 feet. In one hole mineralization occurred between 3,242 and 3,420 feet with assays of 0.07% U_3O_8 over two feet.

History of Development:

1955 - 1957: Three drill holes totalling 12,226 feet were drilled by Nasco Cobalt Silver Mines Limited.

1970: Airborne radiometric survey by Kerr-McGee Corporation.

1974: Airborne magnetometer survey by North American Nuclear Limited.

Principal References:

Robertson, J.A.
1961: Township 143, District of Algoma, ODM, Map 2001, scale 1 inch to 1/4 mile.

1968: Nasco Cobalt Silver Mines Limited; p.31, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Joubin Township, Drill Log Report No. 18, Nasco Cobalt Silver Mines Limited, 1955.
- Technical File No. 63.2802, Kerr-McGee Corporation, 1970.
- Technical File No. 2.1783, North American Nuclear Limited, 1974.
- SMDR File No. 000083.

Rio Algom Limited

Pardee Amalgamated Mines Prospect

(Pardee Zone)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 23' 28" N Longitude 82° 32' 10" W
Joubin Township
Map Reference: OGS Map 2419

Geology:

Radioactivity is associated with the Matinenda Formation of the Elliot Lake Group. The beds strike east and have a shallow northward dip. The main oligomictic, conglomerate horizons average 10 feet in thickness and lie 40 to 70 feet above the basement.

Economic Features:

The main zone is the Pardee Reef which extends over a basement high into the Nordic Channel where locally it has been mined.

The average grade from mine intersections gave 0.04% U_3O_8. A number of holes also intersected a nine foot thick basal conglomerate bed which pinches out 1,000 feet down.

A third bed lies some 80 to 100 feet above the basement, but is intermittent.

History of Development:

1953: Airborne magnetometer and radiometric surveys were completed by Technical Mine Consultants Limited.

1955: Drilling was carried out by Pardee Amalgamated Mines Limited.

1961: Pardee Amalgamated Mines Limited amalgamated with Rio Algom Mines Limited.

1965-1967: Rio Tinto Mines Limited drilled 5 holes totalling 14,703 feet.

1975: Name changed to Rio Algom Limited.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Pardee Zone; p. 52, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto
- Joubin Township, Drill Log Report No. 14, Pardee Amalgamated Mines Limited, 1954-1955.
- Joubin Township, Drill Log Report No. 32 and 42, Rio Tinto Canadian Exploration Limited, 1965-1967.
- Technical File No. 63.419, Technical Mine Consulatants Limited, 1953.
- SMDR File No. 000084.

Rio Algom Limited

Pecors Lake (West) Prospect

(Pardee Zone)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 23' 16" N Longitude 82° 29' 34" W
Joubin Township
Map Reference: ODM Map 2001

Geology:

This prospect is underlain by Middle Precambrian Huronian metasediments comprising of quratz-pebble conglomerate and arkose of the Matinenda Formation of the Elliot Lake Group. East Striking diabase dikes cross the area.

Economic Features:

Ten drill holes spaced out over an area 1,800 feet by 1,100 feet indicated a grade of 0.05% U_3O_8 over a width of 4.9 feet.
Two holes were drilled from the northeast shore of Pecors Lake. The more easterly hole intersected seven radioactive oligomictic conglomerate bands. A 1.3 foot band at 1310.7 feet contained 0.04% U_3O_8 and 0.03% ThO_2. A 7.5 foot band at 1,338.5 feet contained 0.03% U_3O_8 and up to 0.04% ThO_2.

History of Development:

1953-1959: Airborne magnetometer and radiometric surveys were undertaken. Seventeen drill holes totalling 11,197 feet were drilled. Fifteen other holes were drilled at the western end of Pecors Lake and wo others on the northeast shore of Pecors Lake. Work was completed by Algom Uranium Mines Limited.

1976: This property is now owned by Rio Algom Limited.

Principal References:

Robertson, J.A.
1961: Pecors Lake (West) Property; p. 47-48, in Geology of Township 143 and 144, ODM Geological Report No. 4, 65p. Accompanied by Maps 2001 and 2002, scale 1 inch to ¼ mile. Charts A,B,C, and D.

OGS, AFRO, Toronto - Technical File No. 63.441, Algom Uranium Mines Limited, 1953.

Denison Mines Limited

Stancan Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 24' 14" N Longitude 82° 32' 48" W
Joubin Township
Map Reference: ODM Map 2001

Geology:

At the surface, the Gowganda Formation lies unconformably on the Serpent and Espanola Formations and all three are cut by Nipissing diabase. At depth, drilling indicates the presence of lowermost uraniferous member of the Mississagi Formation.

Economic Features:

Assayed samples indicate a grade of 0.648 pounds U_3O_8 per ton over 34 feet, 1.13 pounds U_3O_8 per ton over 6.2 feet and 1.34 pounds U_3O_8 per ton over 5.1 feet.

History of Development:

1955: One drill hole to 2,717 feet was drilled by Stancan Uranium Corporation.

1966-1969: Twenty drill holes totalling 2,165 feet located between the southeats end of Elephant Lake and the northeast arm of Flying Goose Lake. Work was finished by Stanrock Uranium Mines Limited.

1968: Combined airborne magnetic and electromagnetic surveys were carried out by Stanrock Uranium Mines Limited.

1973: Stanrock Uranium Mines Limited amalgamated with Denison Mines Limited.

Principal References:

Robertson, J.A.
1961: Stancan Uranium Corporation; p.58, in Geology of Townships 143 and 144, ODM Geological Report No.4. Accompanied by Maps 2001 and 2002, scale 1 inch to ½ mile. Charts A,B,C,D, and E.
1968: Pardee Zone;p.29-30, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - Joubin Township, Drill Log Report No. 15, Stancan Uranium Mines Limited, 1955.
- Joubin Township, Drill Log Report No. 39, Stanward Corporation and Stanrock Uranium Mines Limited, 1966-1969.
- Technical File No. 2.2414, Stanrock Uranium Mines Limited, 1968.

Rio Algom Limited

St. Mary's Uranium Mines Limited Occurrence

(Pardee Zone)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 23'42" N Longitude 82° 34' 01" W
Joubin Township
Map Reference: ODM Map 2001

Geology:

A deep drill hole intersected the Huronian sequence from the Mississagi Formation at the surface through the Pecors, Ramsey Lake and Matinenda Formations. The rocks exposed were east-striking and north dipping.

Economic Features:

Assays from one drill hole gave values of 0.05% U_3O_8 over a width of 30 feet.

History of Development:

1954-1955: One drill hole was drilled to a depth of 2,105 feet. Work was finished by St. Mary's Uranium Mines Limited and New Jersey Zinc Exploration Company Canada Limited.

1975: St. Mary's Explorations Limited now owned by Rio Algom Limited.

Principal References:

Principal References:

Robertson, J.A.

1961: St. Mary's Uranium Mines Limited; p. 54, in Geology of Township 143 and 144, ODM Geological Report No. 4, 65p. Accompanied by Maps 2001 and 2002. Charts A,B,C, and D.

1968: Pardee Zone; p. 29-30, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Rio Algom Limited

Vite Uranium Mines Limited Occurrence

(Pecors Zone)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 23' 11" N Longitude 82° 27' 14" W
Joubin Township
Map Reference: ODM Map 2001

Geology:

This occurrence is underlain by Middle Precambrian Huronian metasediments comprising argillite and siltstone of the Pecors Formation of the Hough Lake Group and the conglomerates of the Matinenda Formation of the Elliot Lake Goup. The strike is N 75° W and dip is 30° N.

Economic Features:

Two easternmost drill holes intersected thin beds of uraniferous conglomerate with assay value 0.05% U_3O_8 over 3.7 feet and 0.04% U_3O_8 over 4.7 feet.

History of Development:

1951-1953: Exploration and drilling indicate a small nickeliferous zone located about 3,600 feet southwest of the reference point. Work was completed by Tech Corporation Company Limited.

1955-1956: Four drill holes were drilled totalling 3,518 feet by Vite Uranium Mines Limited.

1956: Airborne magnetic and electromagnetic surveys and 1 drill hole to 487 feet were completed by Kerr McGee Corporation.

Principal References:

Robertson, J.A.

1961: Vite Uranium Mines Limited; p. 60, in Geology of Townships 143 and 144, ODM, Geological Report No. 4, 65p. Accompanied by Maps 2001 and 2002. Charts A,B,C,D, and E.

1968: Pecors Zone (Northwest Part) ; p. 30-31, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Joubin Township, Drill Log Report No. 10, Tech Corporation Company Limited, 1941-1945.
- Joubin Township, Drill Log Report No. 37, Kerr McGee Corporation Limited, 1967.
- Technical File No. 63.2074, Kerr-McGee Corporation Limited, 1966.
- SMDR File No. 000089.

Kee #2 Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°28'01"N Longitude 82°57'33"W
Kamichisitit Township
Map Reference: OGS Map 2419

Geology:

Surface outcroppings consist of polymictic conglomerate of the Gowganda Formation of the Cobalt Group. One drill hole intersected three, 60-foot thick conglomerate beds.

Economic Features:

In the lowest section the conglomerate bed shows radioactivity at six times the background. Concentrations average 0.05% U_3O_8.

History of Development:

1969: One drill hole to 3,712 feet was drilled by Cominico Limited.

1975: 51 percent owned by Imperial Oil Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Mineral Development Sector, Department of Energy, Mines and Resources, Ottawa, National Inventory File U 53, 41J/7, Kee #2, November, 1975.

OGS, AFRO, Toronto - Kamichisitit Township, Drill Log Report No. 18, Cominico Limited, 1969.

Hathaway Metal Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°08'30"N Longitude 84°43'40"W
Kincaid Township
Map Reference: OGS Map 2419

Geology:

The western third of the property is underlain by interbedded lava and sediments. These are cut by Archean granite and pegmatite which underly the greater part of the property. At least four sets of Lower Keweenawan diabase dikes are found on the property. Radioactivity is associated with fractures in or near the diabase contact zones.

Economic Features:

On No. 1 showing, the radioactive zone is 20 feet wide by 80 feet long. Grab samples assayed 0.53, 0.67 and 0.66& U_3O_8 (chemical).

On No. 2 showing, samples assayed 0.421 and 0.60% (radiometric equivalent).

History of Development:

1949: Danaray Mines Limited completed geological mapping, stripping and trenching.

1951: A scintillometer survey was carried out.

1966: Hathaway Metal Mines Limited partially restaked the property.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Hathaway Metal Mines Limited; p.22-23, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Abconore Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°20'50"N Longitude 83°29'10"W
Kirkwood Township
Map Reference: OGS Map 2419

Geology:

The eastern half of claim 49979 is underlain by a Nipissing Diabase sill and the western half by sedimentary rocks of the Gowganda Formation consisting of boulder conglomerate and greywacke. A quartz chalcopyrite vein strikes east-west and has been exposed in four pits over a length of 481 feet.

Economic Features:

Radioactivity was recorded in greywacke in the western-most pit and two grab samples averaged 0.095% U_3O_8. A scintillometer survey showed radioactivity 16 times the background.

History of Development:

1958: Pitting, geological and scintillometer surveys were carried out by Abconore Uranium Mines Limited.

1965: Ground magnetic, ground electromagnetic and geochemical soil surveys were completed by Jayco Mines Limited.

1966: Jayco Mines Limited amalgamated with Consolidated Silver Belle Mines Limited to form Silver Belle Mine Limited.

1969: Silver Belle Mine merged with Alchib Development Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie - Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OMNR, Resident Geologist's Files, Sault Ste. Marie.
- Files SSM-68 and SSM-67, Abconore Uranium Mines, 1958.

Robertson, J.A.
1968: Abconore Uranium Mines Limited; p.6,7, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63.1801, Jayco Mines Limited, 1965.
- SMDR File 000008.

J.N. Franz Occurrence

Commodity:

Uranium, columbium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°23'00"N Longitude 84°42'00"W
Labelle Township
Map Reference: OGS Map 2419

Geology:

Radioactive mineralization occurs at or near the north contact of a Keweenawan diabase dike cutting an Early Precambrian granite-gneiss complex. The Franz dike strikes N 35° W and dips steeply northeast.

Pitchblende and uraninite is associated with a breccia zone caused by a faulting along the north contact of the Franz dike and by cross-faulting in the diabase. The pitchblende is associated with calcite and secondary hematite and is believed to be of hydrothermal origin.

Mineralization is also associated with fractures in the diabase and occurs in narrow zones up to six inches.

Economic Features:

A channel sample taken over 3.5 feet across a fracture zone showed 0.80% U_3O_8 (radiometric equivalent). Another sample over 2.5 feet assayed 0.002% U_3O_8 (radiometric equivalent).

History of Development:

1951: Trenching and geological and scintillometer surveys were taken by Highland Prospecting Syndicate.

1975: Within Lake Superior Provincial Park.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury, OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: J.N. Franz Occurrence; p.26, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.107, Highland Prospecting Syndicate, 1950.
- SMDR File No. 000074.

The Ottawa Associates Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°22'00"N Longitude 84°39'00"W
Labelle Township
Map Reference: OGS Map 2419

Geology:

Radioactive mineralization occurs in fractures and fault breccia along a Keweenawan diabase dike contact with Early Precambrian granite.

Pitchblende mineralization was found in a shear zone two to eight inches wide and exposed for a length of 184 feet.

Fractures up to 10 feet long branch from the main shear zone into the diabase and granite.

Economic Features:

Assays of eight grab samples averaged 3.97% U_3O_8 (OGS, AFRO, Toronto, Technical File No. 63A.78).

History of Development:

1949: A geological survey combined with geiger-counter exploration and some stripping was undertaken for the Ottawa Association.

1956: Nine holes totalling 390 feet were drilled by the Ottawa Association.

This occurrence is situated within Lake Superior Provincial Park.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake; Algoma, Manitoulin,and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: The Ottawa Associates; p.26-27, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000075.

McCombe Syndicate Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 47°21'30"N Longitude 84°31'05"W
Labonte Township
Map Reference: OGS Map 2419

Geology:

The radioactive anomaly occurs in a brecciated Keweenawan diabase dike that cuts through Early Precambrian granite gneiss complex. The dike has a northwest trend and dip steeply northeast. The dike, four feet wide, is cut by the Keenan fault. The faulting caused brecciation over a length of about 300 feet and the entire width of the dike. The brecciated zone is highly radioactive with the footwall contact giving the highest readings.

Economic Features:

A sample from this zone assayed 0.07% U_3O_8.

History of Development:

1950: Geological and spot radiometric surveys by McCombe Syndicate.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie - Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: McCombe Syndicate; p.53, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.97, McCombe Syndicate, 1950.
- SMDR File No. 000056.

Napray Mining Corporation Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°22'30"N Longitude 84°31'16"W
Labonte Township
Map Reference: OGS Map 2419

Geology:

The deposit occurs in a Keweenawan diabase dike about 100 feet wide, cutting Early Precambrian granitic gneiss and pegmatite.

This deposit occurs in two showings. The Cranston showing consists of radioactive fractures striking N 40° W. The radioactive mineral is believed to be pitchblende. The Discovery showing consists of a fracture zone striking N 35° W and dipping 75° E.

Economic Features:

Two surface samples from the Discovery showing assayed 0.03% U_3O_8. Two samples from the Cranston showing assayed 0.17% U_3O_8.

History of Development:

1949: Prospecting, geological survey and reconnaissance geiger-counter survey and sampling was undertaken by Napray Mining Company Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Napray Mining Corporation; p.19, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.72, Napray Mining Corporation Limited, 1949.
- SMDR File No. 000058.

McDonough Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 47°22'00"N Longitude 84°22'50"W
Larson Township
Map Reference: OGS Map 2419

Geology:

Radioactivity is associated with pegmatitic patches in granitic and migmatitic rocks.

Narrow veins of dark grey quartz, commonly carrying abundant pyrite, cut some of the pegmatite zone and are also radioactive.

Economic Features:

Samples collected by E.P. McDonough from trenches analyzed from 0.5 to 4.4 lbs. per ton U_3O_8 and 0.2 to 3.8 lbs. per ton ThO_2.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lovell, H.L.; and Pleoger, F.R.
1979: 1978 Report of the Northeastern Region - Sault Ste. Marie Geologist; p.89-99; in Annual Report of the Regional and Resident Geologists, 1978, edited by C.R. Kustra, OGS, MP 84, 135p.

Location X Occurrence

Commodity:

Iron and uranium.

Radioactive Minerals:

Pitchblende and thorite

Location:

Latitude 46°11'42"N Longitude 82°46'43"W
Long Township
Map Reference: ODM Map 2186

Geology:

This occurrence is underlain by Middle Precambrian Huronian Metasediments.

A pyrite-specularite-quartz stockwork cuts interbedded quartzite and shale of the Gowganda Formation adjacent to a diabase dike.

Economic Features:

Six samples from Location X reported to contain an average of 0.08% U_3O_8.

Two specimens submitted by W.C. Baycroft were found to contain pitchblende and thorite.

History of Development:

1911: Location X was held by Lake Superior Corporation.

1952: Location X was staked by J.H. Hirshorn.

Principal References:

Lang, A.H.; Griffith, J.W.; and Steacy, H.R.
1962: Blind River Area History; p.128, in Canadian Deposits of Uranium and Thorium, GSC, Economic Geological Series No. 16 (Second Edition), 324p.

Robertson, J.A.
1970: Location X; p.75, in Geology of the Spragge Area, ODM, GR 76, 109p. Accompanied by Maps 2185 and 2186, scale 1 inch to 1/2 mile.

Rio Algom Limited

Pronto Mine

Commodity:

Uranium

Radioactive Minerals:

Brannerite, uraninite, monazite, thucholite, and uranophane.

Location:

Latitude 46° 12' 38" N Longitude 82° 42' 22" W
Long Township
Map Reference: ODM Map 2186

Geology:

The orebody is in a reef of quartz-pebble conglomerate at the base of the Matinenda Formation of the Elliot Lake Group. It strikes east and dips 15° to 20° S and unconformably overlies the Early Precambrian granite.
Several large diabase dikes cut he orebody and is affected locally by albite, chlorite, and carbonate alterations.

The typical ore is pyritic, uraniferous quartz-pebble conglomerate, generally 6 to 10 feet thick and locally 15 to 20 feet thick. The thorium content here is the lowest of all Elliot Lake Mines.

The orebody has a strike length of about 3,500 feet and an average thickness of 7.5 feet.

Economic Features:

As of 1960, total tons of ore milled was 2,264,404 and recovered 4,643,835 pounds of U_3O_8 at a grade of 2.05% pounds per ton U_3O_8.

History of Development:

1948: Karl Gunterman discovered radioactivity in rocks east of Lauzon Lake.

1953: Franc R. Joubin headed diamond drilling exploration of this discovery.

Pronto Uranium Mines Limited began development of a mine.

1954: A 3 compartment, five level shaft was completed to a depth of 592 feet.

A mill and surface plant went under construction.

1955: The mill was completed and rated at 1,000 tons per day.

1957: The shaft was deepened and a 7 th level was added. The plant was expnanded to a mill rate of 1,500 tons per day.

1960: The mine was closed. the mill was converted to treat copper from the Pater Mine.

Total diamond drilling consisted of 410 holes totalling 116,932 feet and 363 holes from underground totalling 18,089 feet. Two hundred feet of trenching on the surface was completed. Total accumulated footage during underground development consisted of 24,421 feet of drifting and 10,168 feet of crosscutting.

Principal References:

Robertson, J.A.

1968: Rio Algom Mines Limited (Pronto Division) Pronto Mine; p. 8-9, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

1970: History of the Development of the Pronto Mine; p.74-86 in Geology of the Spragge Area, ODM, Geological Report No. 76, 109p. Accompanied by Maps 2185 and 2186, scale 1 inch to ½ mile. Chart A.

OGS, AFRO, Toronto - Long Township, Drill Log Report No. 12,
Pronto Uranium Mines Limited, 1953-1954.
- SMDR File No. 000012.

J.E. Gimby Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47°19'30"N Longitude 84°11'50"W
McAughey Township
Map Reference: OGS Map 2419

Geology:

Radioactive mineralization occurs in a pegmatite-gneiss environment near the contact with mafic volcanics.

Economic Features:

Two samples, one pegmatitic and the other gneissic containing pyrrhotite assayed 0.063 and 0.081% U_3O_8 (radiometric equiv.).

History of Development:

Circa 1950: Prospecting and sampling was done by J.E. Gimby.

1962: Airborne electromagnetic and magnetic surveys were carried out by the Algoma Central Railway.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419,scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: J.E. Gimby Occurrence; p.52, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.506, Group C, Algoma Central Railway, 1962.
- SMDR File No. 000040.

McIntyre Porcupine Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°32'58"N Longitude 83°37'38"W
Morin Township
Map Reference: ODM Map 2272

Geology:

Feldspathic sandstone and conglomerate of the Matinenda Formation of the Elliot Lake Group dip 25 to 45° south.

Economic Features:

Quartz-pebble conglomerate beds of two and three feet thick were intersected in drilling. Average assays were 0.016% U_3O_8 over 2.1 feet. (OGS, AFRO, Toronto, Morin Tp., DLR No. 10).

History of Development:

1955: Four drill holes totalling 953 feet were drilled by McIntyre Porcupine Mines Limited.

Principal References:

Chandler, F.W.
1973: Geology of McMahon and Morin Townships, District of Algoma; Ontario Division of Mines, Geological Report No. 112, 77p. Accompanied by Map 2272, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Morin Township, Drill Log Report No. 10, McIntyre Porcupine Mines Limited, 1955.
- SMDR File No. 000070.

Crazy Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°34'46"N Longitude 82°53'49"W
Nicholas Township
Map Reference: OGS Map 2419

Geology:

Surface outcrops consist of amygdaloidal andesite-basalt and polymictic conglomerate of the Elliot Lake Group.

Economic Features:

Drilling intersected a few quartz pebble conglomerate bands. Average assays were 0.023% U_3O_8 over 6.0 feet from bands that ranged in depth from 80.0 - 1719.7 feet below the surface.

History of Development:

1967: Ground magnetometer survey was carried out by G.E. Parsons.

1968 - 1969: Geological, ground radiometric and 15 drill holes totalling 9,910 feet were performed by the Hanna Mining Company and Hecla Mining Company of Canada Limited.

1974: A multi-sensor airborne geophysical survey was carried by Fort Norman Exploration Incorporated.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Leahy, E.J.
1973: Township 163; p.   in Diamond Drilling in the Huronian Supergroup, Sault Ste. Marie-Elliot Lake Area, ODM, OFR 5093, Vol. 1 and Vol. 2.

OGS, AFRO, Toronto - SMDR File No. 001110.

Damascus Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47° 14' 17" N Longitude 84° 35' 26" W
Peever Township
Map Reference: OGS Map 2419

Geology:

The radioactive anomaly occurs within the sheared contact zone of a Keweeanwan diabase dike and the Roche Dike.

Economic Features:

The radioactivity was traced for 600 feet along the contact of the dike. One part of the zone showed 17 times the background while the average was 2 to 4 times the background. Four bulk samples assayed 0.007% U_3O_8.

History of Development:

1950: Prospecting and a detailed radioactive survey was carried out by Damascus Mines Limited.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Damascus Mines Limited; p. 18, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No. 9, 106 p.

OGS, AFRO, Toronto - SMDR File No. 000046.

J.P. Dolan Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°18'40"N Longitude 84°36'20"W
Peever Township
Map Reference: OGS Map 2419

Geology:

Pitchblende was found at the contact of a Keweenawan diabase dike cutting Early Precambrian granite.

Economic Features:

The results of 17 samples from the property range from 0.003 to 6.6% U_3O_8 (radiometric equivalent).

History of Development:

1950: Prospecting and sampling by J.P. Dolan.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: J.P. Dolan Occurrence; p.127, in Canadian Deposits of Uranium and Thorium (Interim Account), Economic Geology Series No. 16, 173p.

Robertson, J.A.
1968: MacGregor Cove Occurrences; p.18, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Hennessy Uranium Explorations Incorporated Occurrence

Commodity:

Uranium and thorium.

Radioactive Minerals:

Unknown

Location:

Latitude 47° 14' 20" N Longitude 84° 34' 50" W
Peever Township
Map Reference: OGS Map 2419

Geology:

The radioactive samples are believed to have originated in pegmatite dikes within Early Precambrian granites.

Economic Features:

One sample from a pegmatite dike assayed 0.36% U_3O_8. Another assayed 2.4% ThO_2 and 0.02% U_3O_8.

History of Development:

1950: Trenching and stripping was carried out by Hennessy Uranium Explorations Incorporated.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Hennessy Group; p. 128, *in* Canadian Deposits of Uranium and Thorium (Interim Account), Geol. Surv. Canada, Econ. Geol. Ser. No. 16, 173p.

J.G. McCombe Occurrence

Commodity:

Uranium

Radioactive Minerals:

Ellsworthite (betafite) and allanite

Location:

Latitude 47°16'10"N Longitude 84°31'40"W
Peever Township
Map Reference: OGS Map 2419

Geology:

The deposit consists of five zones. Three occur at or near the contact of Keweenawan diabase dikes and Early Precembrian granites. The other two occur in granites and are believed to be pegmatites.

Economic Features:

The average assay for 13 samples was 0.026% U_3O_8.

History of Development:

Circa 1950: Prospecting and sampling was done by J.G. McCombe.
1955: The claims of J.G. McCombe were cancelled.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: McCombe Property; p.130, in Canadian Deposits of Uranium and Thorium (Interim Account), GSC, Economic Geology Series No. 16, 173p.

Patrick Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47° 13' 46" N Longitude 84° 35' 06" W
Peever Township
Map Reference: OGS Map 2419

Geology:

The radioactive anomally occurs within the sheared contact zone between a Keweenawan diabase dike and Early Precanbrian granite. It is associated with pitchblende-bearing, calcite-hematite veins located within the sheared contacts and in the tension cracks in the diabase.

Economic Features:

The average assay from a bulk sample was 0.101% U_3O_8 (chem).

History of Development:

1949-1951: Trenching and geiger counter testing along with 24 drill holes totalling 2,007 feet carried out by Patrick Uranium Mines Limited.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Geology of the Montreal River Area; Ontario Department of Mines Vol. 64, Part 3 , 32p. Accompanied by Map 1955-1, scale 1 inch to ½ mile.

Robertson, J.A.
1968: Patrick Uranium Mines Limited; p. 16-17 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

Ranwick Uranium Mines Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47° 13' 58" N Longitude 84° 36'00" W
Peever Township
Map Reference: OGS Map 2419

Geology:

This occurrence is located at or near the contact of a Keweenawan diabase dike and Early Precambrian granitic gneiss. The dike called the Ranson Dike, averages about 70 feet, strikes northwest and dips 70° northeast.
Two other dikes , the Roche to the north and the Canagau Dike to the south.
Pitchblende occurs in three sets of closely spaced fractures 5 to 10 feet apart parallel to and near the south (footwall) contact. The fractures are filled with a calcite-hematite gangue.

Economic Features:

Assays along 1,049 feet of the adit indicated that pitchblende occurs in 10 zones. Assays from these zones averaged 0.034% U_3O_8 over 3.7 feet in width by 30.2 feet in length.

History of Development:

1948: Discovered by   Ranson.

1949-1951: Stripping,trenching, sampling and an adit to 1,044 feet with two 70 foot crosscuts, and 9 diamond drill holes were dug by Ranwick Uranium Mines Limited.

1961: The adit was opened for public tours. A rock shop and mineral display was also opened.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake;Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Ranwick Uranium Mines Limited; p. 25-26. in Geology of the Montreal River Area; Ontario Department of Mines Vol. 64, Part 3, 32 p. Accompanied by Map 1955-1, scale 1 inch to ½ mile.

Robertson,J.A.
1968: Ranwick Mine; p.17, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000052.

Van Lake Prospecting Syndicate Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47° 14' 29" N Longitude 84° 35' 32" W
Peever Township
Map Reference: OGS Map 2419

Geology:

Radioactive anomalies occur at the contact of a Keweenawan diabase dike and Early Precambrian granite. The dike strikes S 40° W, dips approximately 60° NE and has a width of 200 feet. The pitchblende mineralization is associated with the calcite and hematitie that fills the fractures in the sheared contact zone and cracks in the diabase and granite.

Economic Features:

Two samples from two trenches gave chemical assays of 0.08% and 0.10% U_3O_8.

History of Development:

1950-1951: A scintillometer survey and some trenching was done by Van Lake Prospecting Syndicate.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Nolan Group; p.131, in Canadian Deposits of Uranium and Thorium (Interim Account), Geol. Surv. Canada, Econ. Geol. Ser. No.16, 173p.

OGS, AFRO, Toronto - Technical File No. 63.213, Van Lake Prospecting Syndicate, 1950.
- SMDR File No. 000073.

Consolidated Golden Arrow Mining Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude $46^{\circ}39'03''$N Longitude $82^{\circ}33'08''$W
Piche Township
Map Reference: ODM Map 2305

Geology:

In the area, uranium/thorium mineralization is associated with sediments of the Lorrain Formation of the Cobalt Group. The sediments strike locally east-west and dip gently to the south at 10 - 15°.

Purple bands of hematite or specularite in the sediments are radioactive.

Assays from samples of a 4-inch band of the purple band in conglomerate averaged 0.01% U_3O_8.

In 1968, Consolidated Golden Arrow Mining Limited completed ground radiometric and geological surveys over this area.

Economic Features:

Unknown

Principal References:

Wood, J.
1975: Consolidated Golden Arrow Mining Limited; p.56, in Geology of the Rawhide Lake Area, District of Algoma, Ontario Division of Mines, Geoscience Report 129, 67p. Accompanied by Maps 2305 and 2306, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - SMDR File No. 000028.
- Technical File No. 63.2358, Consolidated Golden Arrow Mining Limited, 1968.

Inspiration Mining & Development Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Monazite

Location:

Latitude 46°39'04"N Longitude 82°33'11"W
Piche Township
Map Reference: ODM Map 2305

Geology:

Mineralization occurs in the interbedded quartzite and conglomerate of the Lorrain Formation of the Cobalt Group.

Economic Features:

Drilling intersected bands of radioactive conglomerate. The average assay was 0.01% U_3O_8 (radiometric equivalent) over 29.6 feet.

History of Development:

1953: Six drill holes totalling 1,822 feet, were drilled between the southeast shore of Rawhide Lake and the southwest shore of Rosemarie Lake. Work was done by A. and W. Hanson.

1968: Geological survey was carried out by Weston & Company Incorporated.

Principal References:

Wood, J.
1975: A. and W. Hanson; p.58, in Geology of the Rawhide Area, District of Algoma; Ontario Division of Mines, GR 129, 67p. Accompanied by Maps 2305 and 2306, scale 1 inch to 1/2 mile (1:31,680).

OGS, AFRO, Toronto - Piche Township, Drill Log Report No. 11, W. Hanson, 1953.
- Technical File No. 63A.545, Weston and Company Inc., 1968.
- SMDR File No. 000029.

Cobalt Consolidated Mining Corporation Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°38'14"N Longitude 82°54'08"W
Poulin Township
Map Reference: ODM Map 2346

Geology:

Surface exposures consist of ferruginous slightly radioactive quartzites of the Lorrain Formation of the Cobalt Group. They strike east-west and dip flatly 10 to 15° south.

Economic Features:

One drill hole intersected radioactive quartz-pebble conglomerate which gave 0.023% (radiometric equivalent) U_3O_8 over 1.5 feet. Assays of samples from another drill hole located about 660 feet north of the reference point, were 0.006% U_3O_8 (radiometric equivalent) over 1.3 feet. (OGS, AFRO, Toronto, Poulin Township, Drill Log Reports No. 11 & 13).

History of Development:

1954: One drill hole to 72 feet drilled by E.E. Campbell.

1955: One drill hole drilled to 1,880 feet. Work by Cobalt Consolidated Mining Corporation.

1957: Cobalt Consolidated renamed Agnico Mines Limited.

1972: Agnico Mines Limited amalgamated to form Agnico-Eagle Mines Limited.

Principal References:

Robertson, J.A.
1968: Iron Lake Area; p.13,14, in Uranium and Thorium Occurrences in Northern Ontario, ODM, MRC No. 9, 106p.

Robertson, J.A.
1970: Poulin and Sagard Townships, Algoma District; Ontario Division of Mines, Geological Map 2346, scale 1:31,680 or 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Poulin Township, Drill Log Report No. 11, Cobalt Consolidated Mining Corporation, 1955.
- Poulin Township, Drill Log Report No. 13, E.E. Campbell, 1954.
- SMDR File No. 001121.

Ranger Lake Uranium Mining Company Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°57'00"N Longitude 83°29'30"W
Reilly Township
Map Reference: OGS Map 2419

Geology:

The showing is in a diabase dike (location unknown) about 60 feet wide where an aplite dike of eight inches in width extends diagonally across it for a length of 30 feet. The centre part of the aplite dike has two to three inches wide radioactive zone of carbonate and quartz which has given anomalies up to five times the background.

Economic Features:

A selected sample taken from the most radioactive part of the dike showed 0.30% U_3O_8 (radiometric equivalent).

History of Development:

Pre 1953:	Prospecting was carried out by H. Evans.
1953 - 1954:	Trenching, aeroradiometric survey, and six inclined drill holes totalling 2,240 feet were completed by Ranger Lake Uranium Mining Company Limited.
1956:	Ranger Lake Uranium Mining Company Limited merged into Century Mining and Development Corporation.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie,-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Aubinadong Group; p.123-124, in Canadian Deposits of Uranium and Thorium, GSC, Economic Geology Series No. 16 (Interim Account), 173p.

Robertson, J.A.
1968: Ranger Lake Uranium Mining Company Limited; p.52, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Sault Ste. Marie File - SSM 228.

OGS, AFRO, Toronto - Technical File No. 63.649, Ranger Lake Uranium Mining Company Limited, 1954.
- Reilly Township, Drill Log Reports No. 10 and 11, Ranger Lake Uranium Mining Company Limited, 1954.
- SMDR File No. 000039.

Canagau Mines Limited

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°13'52"N Longitude 84°36'58"W
Rix Township
Map Reference: ODM Map 2419

Geology:

Radioactive anomalies occur at the sheared contact of a Keweenawan diabase dike and Early Precambrian granite. The dike and the Canagau dike strikes slightly northwest and dips steeply north. Patches of pitchblende up to 1/4 inch wide can be seen in fractures filled with a calcite-hematite gangue.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Canagau Mines Limited and Dickenson Properties; p.20, in Geology of the Montreal River Area, ODM, AR Vol. 64, Pt. 3, 32p. Accompanied by Map 1955-1, scale 1 inch to 1/2 mile.

Robertson, J.A.
1968: Canagau Mines Limited; p.24, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Sault Ste. Marie Files, SSM998.

Aubrey Falls Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°54'50"N Longitude 83°12'40"W
Root Township
Map Reference: ODM Map 2419

Geology:

The radioactive minerals occur in rusty weathering gossan material enclosed in small quartz veins, which cut a red granite close to a diabase dike. (ODM Preliminary Report 1950-6).

Economic Features:

Assay results from a zone 2.5 feet wide, traced over 800 feet averaged 0.10% U_3O_8.

History of Development:

1949 - 1950: Trenching, geological mapping, geiger counter survey, five inclined drill holes 799 feet by Preston Dome Mines Limited.

Four drill holes, seven pitsand, six on trenches.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Aubrey Falls Occurrence; p.14, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Drill Log Report, Root Township, No. 10.
- SMDR File No. 000037.

Caneonti Mines Limited Prospect

Commodity:

Thorium, uranium

Radioactive Minerals:

Monazite

Location:

Latitude $46^{\circ}38'56"$N Longitude $82^{\circ}74'01"$W
Sagard Township
Map Reference: ODM Map 2346

Geology:

At the west end of Tenfish Lake, a 35-foot thick quartz-pebble conglomerate bed striking easterly and dipping gently south is exposed for approximately 1,000 feet.

Further deepening of trenches revealed three quartz-pebble conglomerate beds over a width of 35 feet with the bottom three to four feet being most strongly radioactive.

Economic Features:

A radioactive survey of the old trenches in the conglomerate bed indicated an average uranium content of 0.02% and average thorium content of 0.09%. A few thin hematitic conglomerate beds with radioactivity two to three times the background were intersected in drilling (OGS, AFRO, Toronto, Sagard Township DLR No. 13). Four samples of a bulk sample from the trenches revealed 0.002% U_3O_8 and 0.52% ThO_2.

History of Development:

1955: Six trenches and two drill holes totalling 1,164 feet were drilled by Caneonti Mines Limited.

Two drill holes totalling 363 feet located near the southwest shore of Tenfish Lake. Work by Maralgo Mines Limited.

1968: Geological and radiometric surveys and deepening of old trenches by Armore Mines Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Mount Lake Area; p.13, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

1970: Poulin and Sagard Townships, Algoma District; Ontario Division of Mines, Geological Map 2346, scale 1:31,680 or 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Sagard Township, Drill Log Report No. 13, Maralgo Mines Limited, 1955.
- Technical File No. 63.2350, Armore Mines Limited, 1968.
- SMDR File 000032.

Grey Trout Lake Prospect

Commodity:

Thorium and uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°39'06"N Longitude 82°42'49"W
Sagard Township
Map Reference: OGS Map 2419

Geology:

A gamma ray spectrometer survey indicated anomalous readings along an east-west strike length of approximately 10,000 feet. The radioactivity appears to be a thorium source.

Economic Features:

The radioactive quartz-pebble conglomerate beds were tested by eight drill holes. The zone is indicated to grade 0.035% Th over 14.7 feet. Most beds contain less than 0.01% U_3O_8.

Another set of six down-dip drill holes located approximately one mile southwest of the reference point and 4,000 feet northeast of Blue Sky Lake, intersected hematite-bearing arkose quartz pebble conglomerate at depths ranging from 10 to 800 feet. Drilling indicated a 12° southerly-dipping conglomerate grit zone with an average thickness of 16.2 feet which contains approximately 0.02% ThO_2 and less than 0.01% U_3O_8.

History of Development:

1968: Geological, ground magnetic and radiometric surveys were carried out. Trenching and eight drill holes totalling 2,130 feet were drilled. Work completed by International Bibis Tin Mines Limited.

Six drill holes totalling 2,731 feet located about one mile southwest of the reference point were drilled by Silver Men Mines Limited.

One drill hole drilled to 301 feet located about 3,100 feet southwest of the reference point was drilled by E. Karpela.

1973: International Bibis Tin Mines Limited renamed Laurasia Resources Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1970: Poulin and Sagard Townships, Algoma District; Ontario Division of Mines, Geological Map 2346, scale 1:31,680 or 1 inch to 1/2 mile.

1970: Townships 1A and 1B; p.49, in Summary of Fieldwork, ODM, MP 43, 96p.

OGS, AFRO, Toronto - Sagard Township, Drill Log Report No. 11, E. Karpela, 1968.
- Sagard Township, Drill Log Report No. 18, Silver Men Mines Limited, 1968.
- Sagard Township, Drill Log Report No. 19, International Bibis Tin Mines Limited, 1968.
- Technical File No. 63.2455, International Bibis Tin Mines Limited, 1969.

Harvard Uranium Mines Limited Prospect

Commodity:

Uranium and copper.

Radioactive Minerals:

Unknown

Location:

Latitude 46°38'08"N Longitude 82°46'02"W
Sagard Township
Map Reference: ODM Map 2346

Geology:

Sediments of the Lorrain Formation are intruded by Nipissing diabase which contains numerous small quartz veins.

Chalcopyrite, pyrite and uranium mineralization is associated with late stage alteration of granophyric sections of diabase and quartz veins.

The principal alternation zones strike east, appear to dip vertically, have widths ranging from 10 - 100 feet and have strike lengths up to 600 feet.

Economic Features:

Best assays average 0.14% U_3O_8 and 1.22% Cu over 6.0 feet. (OGS, AFRO, Toronto, Sagard Tp. DIR No. 17).

Principal References:

Robertson, J.A.
1970: Townships 1A and 1B; p.49-50, in Summary of Fieldwork, 1970, ODM, MP 43, No. 15.
1970: Poulin and Sagard Townships, Algoma District; Ontario Division of Mines, Geological Map 2346, scale 1:31,680 or 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Sagard Township, Drill Log Report No. 17, Harvard Uranium Mines Limited, 1955.
- SMDR File No. 000033.

Denvic Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°13'38"N Longitude 82°19'22"W
Shedden Township
Map Reference: ODM Map 2314

Geology:

The Middle Precambrian Huronian metasediments strike N 85° E and dip 75° S and they are bounded on the north by Early Precambrian granite.

Minor radioactivity was associated with the argillites of the Pecors Formation of the Hough Lake Group (ODM, OFR 5026, p.104, 1969).

Economic Features:

A ten-foot wide shale band was strongly radioactive at the surface, and gave readings of 5 to 12 times the background at depth (OGS, AFRO, Toronto, Shedden Township, DLR No. 12).

Few thin pyritic quartzite beds of Matinenda Formation were intersected in drilling. Assays averaged 0.01% U_3O_8 over 22 feet.

History of Development:

1954: Geological survey and two drill holes totalling 401 feet were completed by Peach Uranium and Metal Mining Limited.

1955: Additional drilling on the western extension of the zone and eight trenches totalling 347 feet were carried out by Panel Consolidated Uranium Mines Limited.

Principal References:

Robertson, J.A.
1977: Peach Uranium and Metal Mining Limited; p.57, in Geology of the Cutler Area, District of Algoma, Ontario Division of Mines, Geoscience Report No. 147, 73p. Accompanied by Maps 2314 and 2315, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Shedden Township, Drill Log Report No. 12, 1954.
- Technical File No. 63A.179, Panel Consolidated Uranium Mines Limited.

Batchawana Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47°11'04"N Longitude 84°37'04"W
Slater Township
Map Reference: OGS Map 2419

Geology:

Mineralization is located within a fault zone in one of eight Keweenawan diabase dikes cutting an Early Precambrian granite pegmatite complex. The fault zone is filled with quartz plus hematite and calcite in which a pitchblende vein is located.

The mineralization consists of two pods, one 15 by 10 and one and one-half inches and another located with the fault zone is exposed over a length of 150 feet.

History of Development:

1949 - 1951: Geological, magnetometer and scintillometer surveys, 9 holes to 355 feet, and some trenching carried out by Batchawana Uranium Mines Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Batchawana Uranium Mines Limited; p.13, in Geology of the Montreal River Area, ODM, AR, Vol. 64, Pt. 3, 32p. Accompanied by Map 1955-1, scale 1 inch to 1/2 mile.

Robertson, J.A.
1968: Batchawana Uranium Mines Limited; p.20, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63.172, Batchawana Uranium Mines Limited, 1950.
- Technical File No. 63.261, Batchawana Uranium MInes Limited, 1951.
- Drill Log Report, 1951, Batchawana Uranium Mines Limited.
- SMDR File No. 000061.

SSM Files 285, 286.

Bobcam Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°11'00"N Longitude 84°40'12"W
Slater Township
Map Reference: OGS Map 2419

Geology:

Pitchblende occurs in narrow carbonate veinlets in fractures within Keweenawan diabase dikes. The veinlets are usually perpendicular to the contact with the country rock.

History of Development:

1949: Geological, magnetometer and radiometric surveys, and some trenching was carried out by Bobcam Mines Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Bobcam Mines Limited; p.13, in Geology of the Montreal River Area, ODM, Vol. 64, Pt. 3, 32p. Accompanied by Map 1955-1, scale 1 inch to 1/2 mile.

Robertson, J.A.
1968: Bobcam Mines Limited; p.20, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000062.
- Technical File No. 63.179, Bobcam Mines Limited, 1949.

Camray Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°10'56"N Longitude 84°41'22"W
Slater Township
Map Reference: OGS Map 2419

Geology:

Pitchblende veins occur in tension cracks within Early Precambrian granites near its sheared contact with the footwall of a Keweenawan diabase dike. This dike strikes northwest and steeply north. (See Theano Point Occurrence).

History of Development:

1949: Radioactivity and geological surveys and some stripping was carried out. An adit 230 feet long was driven under the surface showing. All work was carried out by Camray Mines Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Camray Mines Limited; p.21-22, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.79, Camray Mines Limited, 1949.
- Technical File No. 63.177, Camray Mines Limited, 1949.
- SMDR File No. 000063.

Theano Point Prospect
(Camray Mines Limited)

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°10'58"N Longitude 84°42'36"W
Slater Township
Map Reference: OGS Map 2419

Geology:

Pitchblende veins occur in tension cracks within Early Precambrian granite at its contact with the footwall of the Keweenawan diabase dike. The dike strikes N 80° W and dips about 70° N.

The pitchblende is associated with calcite and hematite and found in veins one inch or less but some stringers are six inches or greater.

The pitchblende-bearing fractures are concentrated in two zones. The west zone extends 245 feet east from the lake, and the east zone, 230 feet to the east, is 85 feet long. They both strike N 80° W and dip 70° N.

Economic Features:

Samples from a shaft sunk 150 feet in 1949 averaged 0.24% U_3O_8 over three feet for a length of 52 feet. Ninety feet from the shaft, average muck samples were 0.044% U_3O_8, average back samples were 0.043% U_3O_8.

East of the shaft and extending for 110 feet, average muck values were 0.02% U_3O_8 and average back samples were 0.037% U_3O_8 (ODM, Annual Report, Vol. 64, pt. 3, p.18-19, 1955).

History of Development:

1947: Samples were collected in the area by B.A. Stanard.

1949: The following work was done by Camray Mines Limited:
- radioactivity was monitored and geological surveys and trenching was done.
- a shaft inclined at 69° was sunk to 150 feet. A level was established at 138 feet on which 496 feet of drifting was done.
- diamond drilling consisting of 43 holes totalling 3,086 feet from the surface and 29 holes totalling 1,552 feet from underground.

1964: Camray Mines Limited was cancelled (the charter).

Principal References:

Nuffield, E.W.
1955: Geology of the Montreal River Area; ODM, Vol. 64, Pt. 3, 32p. Accompanied by Map 1955-1, scale 1 inch to 1/2 mile.

Robertson, J.A.
1968: Camray Mines Limited; p.21, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

A.C. Mosher & G. Byles Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°08'33"N Longitude 84°42'32"W
Slater Township
Map Reference: OGS Map 2419

Geology:

Mineralization is associated with a pitchblende deposit that occurs at the contact of a Keweenawan diabase dike with the Early Precambrian granitic country rock.

Economic Features:

A sample from this occurrence assayed 0.42% U_3O_8 (chemical).

History of Development:

Prior to 1952: Prospecting and sampling by A.C. Mosher and G. Byles.

1974: This property was restaked by Lucien Lacasse.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake: Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Mosher-Byles Group; p.130, in Canadian Deposits of Uranium and Thorium (Interim Account), GSC, Economic Geology Series No. 16, 173p.

Robertson, J.A.
1968: A.C. Mosher and G. Byles Occurrence; p.53, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Robb-Murmac Uranium Mines Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°12'26"N Longitude 84°38'38"W
Slater Township
Map Reference: OGS Map 2419

Geology:

The radiometric anomalies are located at or near the sheared contact between Keweenawan diabase dikes and Early Precambrian granite.

The "G" showing located in the south part of the property consists of a shear zone at the contact of the diabase and the granite. The shear zone, from a few inches to five feet in width, consists of thin veins and a fine network of fractures which are filled with hematite and calcite and uranium bloom occurring on the surface. A sample from this showing registered 22.8 on the geiger counter.

The A-West showing consists of visible pitchblende exposed in a trench in the diabase about three feet from the granite contact. A geiger count of 8.1 was obtained over the showing.

The A-North showing consists of two zones where a geiger count reached 15. One zone is in the diabase approximately 15 feet from the south contact while the other zone is in the granite about 20 feet north of the diabase contact.

History of Development:

1949: Geological and radiometric surveys, some stripping and trenching as well as 22 holes totalling 3,322 feet were carried out by Murmac Lake Athabasca Mines Limited.

1976: A gamma ray spectrometer survey was carried out by Advance Murgor Exploration Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Murmac Lake Athabasca Mines Limited; p.24, in Geology of the Montreal River Area, ODM, AR, Vol. 64, Pt. 3,

Robertson, J.A.
1968: Robb-Murmac Uranium Mines Limited; p.23, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Drill Log Report, Murmac Lake Athabasca Mines Limited, 1949.
- Technical File No. 63.173, Robb-Murmac Uranium Mines Limited, 1949.
- Technical File No. 63A.85, J.P. Arnott, 1949.
- SMDR File No. 000007.

Soo-Tomic Uranium Mines Limited Occurrence

Commodity:

Uranium and thorium.

Radioactive Minerals:

Allanite and carnotite.

Location:

Latitude 47° 11' 44" N Longitude 84° 36' 21" W
Slater Township
Map Reference: OGS Map 2419

Geology:

Radioactivity occurs in a complex of granite, gneiss, and pegmatite of Early Precambrian age cut by northwest and northeast trending Keweenawan diabase dikes. Radioactivity was due to allanite. Some carnotite staining was also present.

Economic Features:

Samples from oxidized sheared material gave assays of 0.02 and 0.04% U_3O_8.

History of Development:

1949: A geological survey and some sampling was done by Soo-Tomic Uranium Mines Limited.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake: Algoma, Manitoulin, and Sudbury Districts: OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Soo-Tomic Uranium Mines Limited; p. 16 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

OGS, AFRO, Toronto - SMDR File No. 000045.

Fausten Exploration Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47°13'29"N Longitude 84°36'24"W
Smilsky Township
Map Reference: OGS Map 2419

Geology:

This occurrence consists of three radioactive fractures in Early Precambrian granite at the contact with a northwest trenching Keweenawan diabase dike.

Economic Features:

Six samples from the deposit ranged from 0.026 to 0.20% U_3O_8 (radiometric equivalent) and four other samples showed 0.068 to 3.0% U_3O_8 (chemical).

History of Development:

1949: Geological, geiger and geophysical surveys completed by Ranrouyn Mines Limited.

1951: Geological and geophysical surveys completed by the Skaphe Group.

1952: Prospecting and sampling was done by Fausten Exploration Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake: ALgoma, Manitoulin, and Sudbury Districts; OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Fausten Exploration Limited; p.52, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000042.

Jay-Dee Enterprises Incorporated Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47°13'20"N Longitude 84°30'30"W
Smilsky Township
Map Reference: OGS Map 2419

Geology:

The radioactivity is associated with the pegmatite phase of an Early Precambrian granitic intrusion.

Economic Features:

Drill core analysis ranged from 0.012% U_3O_8 over lengths ranging from 6 inches to 6 feet.

History of Development:

1957: Geological and scintillometer surveys were completed. 15 drill holes were drilled totalling 3,081 feet. Work by Jay-Dee Enterprises Incorporated.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake: Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Jay-Dee Enterprises Incorporated; p.15, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Smilsky Township, Drill Log Report, Jay-Dee Enterprises Incorporated, 1957.
- SMDR File No. 000041.

Labine-McCarthy Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende

Location:

Latitude 47°13'28"N Longitude 84°35'06"W
Smilsky Township
Map Reference: OGS Map 2419

Geology:

Mineralization occurs near the south contact of a Keweenawan diabase dike with Early Precambrian granite. This dike strikes N 80° W and dips steeply to the north. The McCarthy fault cuts off the dike to the east.

The radioactivity is found mostly in a brecciated zone 12 to 15 inches wide within the diabase dike, parallel and within several feet of the south contact.

The fractures are filled with a calcite-hematite gangue and pitchblende. This zone gave readings of four to five times the background.

History of Development:

1949 - 1950: Prospecting trenching was performed. A six-mile road to the highway was built and a power transmission line was erected.

1951: An adit was dug with 1,628 feet of drifting along the dike and the fault. Ten crosscuts totalling 192 feet and a 164-foot raise were dug.

Eight holes totalling 1,100 feet were drilled from underground. All work was performed by Labine-McCarthy Uranium Mines Limited.

1967: Some prospecting was done by Primrock Mining and Exploration Limited.

1969: Four drill holes were drilled totalling 528 feet by Primrock Mining and Exploration Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake: Algoma, Manitoulin, and Sudbury Districts: OMNR, Geological Compilation Series Map 2419, scale 1:253,440 ot 1 inch to 4 miles.

Mineral Resources Branch, Dept. of Energy, Mines and Resources, Ottawa, File 41N/2, U1, McCarthy Dyke (Collins Property), August 1969.

Nuffield, E.W.
1955: Geology of the Montreal River Area; ODM, Vol. 64, Pt. 3, 32p. Accompanied by Map 1955-1, scale 1 inch to 1/2 mile.

Robertson, J.A.
1968: Labine-McCarthy Uranium Mines Limited; p.15-16, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Smilsky Township, Drill Log Report No. 10, Primrock Mining and Exploration Limited, 1969.
- Technical File No. 63A.546, Primrock Mining and Exploration Limited, 1967.
- SMDR File No. 000043.

Spragge Creek Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°13'13"N Longitude 82°41'07"W
Spragge Township
Map Reference: ODM Map 2186

Geology:

This occurrence lies in the Southern Structural Province and is underlain by Middle Precambrian Huronian Metasediments.

Economic Features:

A grab sample from a surface outcrop of conglomerate at the fork in Spragge Creek, approximately 1,900 feet east of the township boundary assayed 0.11% U_3O_8 (ODM, GR 76, p.86, 1970).

History of Development:

1953 - 1959:	Airborne magnetic, electromagnetic and radiometric surveys and drilling was carried out by Pronto Uranium Mines Limited.
1960:	Those claims became part of Rio Algom Mines Limited as the Pronto Division.
1975:	Owners name changed to Rio Algom Limited.

Principal References:

Robertson, J.A.
1970: Spragge Creek Occurrence; p.86, in Geology of the Spragge Area, ODM, GR 76, 109p. Accompanied by Maps 2185 and 2186, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - SMDR File No. 000013.
- Technical File No. 63.419, Pronto Uranium Mines Limited, 1953-55.

Anabar Mining and Development Company Limited Occurrence

Commodity:

Uranium

Location:

Latitude 46°22'46"N Longitude 82°55'42"W
Timmermans Township
Map Reference: OGS Map 2419

Geology:

Drilling intersected a few thin pyritized radioactive conglomerate bands from 0.4 to 3.5 feet thick.

Economic Features:

The best assays were 0.05% over 0.4 feet and 0.18% over 3.5 feet U_3O_8 (ODM, GR 13, p.56, 1963).

History of Development:

1955: Fourteen drill holes totalling 5,532 feet were drilled by Anabar Mining and Development Company Limited.

1967: Airborne geophysical and magnetometer surveys were carried out by Denison Mines Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake: Algoma, Manitoulin, and Sudbury Districts: OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Anabar Mining and Development Company Limited; p.48, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Robertson, J.A.
1963: Anabar Mining and Development Company Limited; p.53, 55, in Townships 155, 156, 161, and 162, Geological Report No. 13, ODM, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

Sault Ste. Marie SSM 423.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 20, Anabar Mining and Development Company Limited, 1955.
- SMDR File No. 000121.

Big Game Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°23'21"N Longitude 82°49'31"W
Timmermans Township
Map Reference: OGS Map 2419

Geology:

This occurrence lies in the Southern Structural Province and is underlain by Middle Precambrian Huronian metasediments of the Matinenda Formation. The area is crossed by North and South Rossmere Faults.

Economic Features:

A 2.5 foot bed of pyritiferous radioactive oligomictic conglomerate intersected in one drill hole gave an assay value of 0.019% U_3O_8 (OGS, AFRO, Toronto, File No. 63A303).

History of Development:

1953: Airborne magnetometer and scintillometer surveys carried out by Technical Mines Consultants Limited.

1954 - 1955: Geological, ground scintillometer surveys, soil sampling and mine drill holes totalling 5,434 feet were carried out by New Jersey Zinc Exploration Company (Canada) Limited.
Drill hole BG-1 was completed jointly by Big Game Mines Limited to a depth of 917 feet.

1957: These claims came under the option of Consolidated Fredrick Mines Limited (controlled by Rio Tinto Group). This company allowed the claims to lapse.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie,-Elliot Lake: Algoma, Manitoulin, and Sudbury Districts: OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Big Game Mines Limited; p.54, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A303, New Jersey Zinc Exploration Company (Canada) Limited, 1954-1955.
- Timmermans Township, Drill Log Report No. 21, New Jersey Zinc Exploration Company (Canada) Limited, 1955.
- Technical File No. 63.419, Technical Mine Consultants Limited, 1954.
- SMDR File No. 000123.

SSM Files 393, 399.

Buffana Uranium Mines Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°24'38"N Longitude 82°49'52"W
Timmermans Township
Map Reference: OGS Map 2419

Geology:

The surface outcrops east of Little Moon Lake consist of rock types belonging to the Matinenda Formation of the Elliot Lake Group. To the north end of the lake, the outcrops are of the Ramsay Lake and Recors Formation of the Hough Lake Group. These sediments lie unconformably on Early Precambrian granite which is intersected by drilling at depths ranging from 460 feet to 1,025 feet below the surface.

Economic Features:

A few thin radioactive quartz-pebble conglomerate beds with minor pyrite were intersected by drilling at 184.5 feet and 642.0 feet. The average assay was 0.048% U_3O_8 over 2.75 feet.

History of Development:

1954 - 1955: Geological mapping and six drill holes totalling 4,867 feet were undertaken by Rochester & Pittsburg Coal Company (Canada) Limited.

1974: Airborne magnetometer, electromagnetic, radiometric and and resistivity surveys were carried out by Fort Norman Exploration Incorporated.

1975: Airborne magnetometer, electromagnetic survey was done by Fort Norman Group of Companies.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake: ALgoma, Manitoulin, and Sudbury Districts: OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Buffana Uranium Mines Limited; p.48, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Robertson, J.A.
  1963: Buffana Uranium Mines Limited; p.53,59, *in* Townships 155, 156, 161, and 162, ODM, GR 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 26, Rochester & Pittsburg Coal Company (Canada) Limited, 1955.
- Technical Report 2.1575, Fort Norman Explorations Incorporated, 1974.
- Technical Report 2.1850, Fort Norman Group of Companies, 1975.
- SMDR File No. 000124.

Sault Ste. Marie Files, SSM 431.

Coffee Lake Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°25'42"N Longitude 82°56'32"W
Timmermans Township
Map Reference: OGS Map 2419

Geology:

Surface exposures consist of Mississagi Formation of Hough Lake Group. At depth, rock types belonging to Pecors, McKim, and Matinenda Formations lie unconformably on Early Precambrian granite. The basement was reached after 3,193 feet. In this drill hole two thin sections of pyritiferous maniferous oligomictic conglomerate were intersected at depths from 2,963.5 to 2,996.5. The average assay was 0.054% U_3O_8 and 0.092% ThO_2% over 1.0 foot.

History of Development:

1967: Combined airborne magnetometer and electromagnetic surveys were carried out by Denison Mines Limited.

1969: Drill Hole No. DM 69-3 was drilled to 3,212 feet by Denison Mines Limited

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie -Elliot Lake: Algoms, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 13, Denison Mines Limited, 1969.
- Technical File No. 63.2201, Denison Mines Limited, 1967.
- Technical File No. 63.2264, Denison Mines Limited, 1967.
- SMDR File No. 001112.

Denison Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°24'58"N Longitude 82°51'22"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

Surface exposures consist of rock types belonging to the Ramsay Lake Formation of the Elliot Lake Group. These sediments strike east-west and dip flatly at angles varying from 10° to 25° to the north.

Economic Features:

Drill Hole No. DM-68-1 intersected pyritiferous radioactive oligomictic conglomerate section from 820 to 916 feet and 0.036% ThO_2 over 1.5 feet. (OGS, AFRO, Toronto, Timmermans Township, DLR No. 10, 1968).

History of Development:

1954:	Airborne scintillometer survey by Sapphire Petroleums Limited.
1967 - 1968:	Combined airborne magnetometer and electromagnetic surveys and one drill hole to 1,004 feet were carried out by Denison Mines Limited.

Principal References:

Leahy, E.J.
1973: Township 161; p. _in_ Diamond Drilling in the Huronian Supergroup, Sault Ste. Marie-Elliot Lake Area, ODM, OFR 5093, Vol. 1 and Vol. 2,

Robertson, J.A.
1963: Townships 155, 156, 161, and 162; ODM, GR 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - SMDR File No. 001120.

Dominion Uranium Corporation Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°23'00"N Longitude 82°53'47"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

Fourteen drill holes were drilled on the south shore of Bakers Bay, southeast of Graveyard Island. These drill holes intersected occasional thin oligomictic pebble bands. The average assay was 0.016% U_3O_8 over 7.0 feet.

History of Development:

1954 - 1955: Geological Survey and 14 drill holes totalling 5,709 feet were completed by Dominion Uranium Corporation.

1974: Airborne magnetometer, electromagnetic, radiometric and resistivity surveys on former claim SSM 32628 were carried out by Fort Norman Explorations Limited.

Principal References:

Robertson, J.A.
1968: Dominion Uranium Corporation Limited; p.49, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

1963: Townships 155, 156, 161, and 162; ODM, GR 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 32, Dominion Uranium Corporation, 1955.
- Technical Report No. 2.1575, Fort Norman Explorations Incorporated, 1974.
- SMDR File No. 000125.

Jeanette Minerals Limited Prospect

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°24'46"N Longitude 82°51'40"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

This prospect lies in the Superior Structural Province and is underlain by the Matinenda Formation of the Elliot Lake Group. These sediments strike east-west and dip flatly to the north.

Economic Features:

Two drill holes intersected pyritiferous radioactive oligomictic conglomerate with the average assays 0.029% U_3O_8 and 0.02% ThO_2 over 28 feet. (OGS, AFRO, Toronto, Timmermans Tp., DLR No. 24).

History of Development:

1953: 14 pits over a distance of one mile were dug by Moneta Mining Co. Limited.

1954: Geological and airborne scintillometer surveys and five drill holes were completed by Sapphire Petroleums Limited.

1955: Five drill holes totalling 2,406 feet were drilled by Jeanette Minerals Limited in conjunction with Sapphire Petroleums Limited.

1967: Combined airborne magnetometer and electromagnetic surveys by Denison Mines Limited.

Principal References:

Robertson, J.A.
1963: Jeanette Minerals Limited; p.66-67, in Townships 155, 156, 161, and 162, ODM GR 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Reports No. 24 and 25, Sapphire Petroleums Limited, 1954-1955.
- Technical File No. 63.466, Sapphire Petroleums Limited, 1954.
- Technical File No. 63.2201, Denison Mines Limited, 1967.
- Technical File No. 63.2264, Denison Mines Limited, 1967.
- SMDR File No. 000127.

D.R. Martin Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°23'18"N Longitude 82°51'58"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

This occurrence is underlain by feldspathic quartzite, arkose and conglomerate of the Matinenda Formation of the Elliot Lake Group which lies unconformably on Early Precambrian granite. Two drill holes intersected the basement at 477 and 408 feet respectively.

Economic Features:

Two drill holes intersected thin radioactive conglomerate beds with sulphide mineralization at depths ranging from 125.6 to 565.3 feet. Average assays were .021% U_3O_8, .040% ThO_2 over 1.2 feet.

History of Development:

1955: Two drill holes totalling 1,111 feet were drilled by Darwin R. Martin.

1974: Airborne magnetometer, electromagnetic radiometric, and resistivity surveys were carried out by Fort Norman Explorations Inc.

Principal References:

Robertson, J.A.
1963: D.R. Martin; p.49-50, in Townships 155, 156, 161, and 162, ODM, GR 13, 88p.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 41, Darwin R. Martin Property, 1955.
- Technical File No. 2.1575, Fort Norman Explorations Incorporated, 1974.

Moon Lake Mines Limited Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°23'10"N Longitude 82°50'30"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

The area lying along the north shore of Baker's Bay is underlain by Matinenda quartzite and arkose.

Some 24 holes were drilled in an area stretching along the south shore of Matinenda Lake, between the south end of Little Moon Lake and the east end of Baker's Bay and in the vicinity of Caribou Lake.

Economic Features:

Two thin sections of pyritiferous uraniferous oligomictic conglomerate were intersected at 293.8 and 556.5 feet. Average assays were 0.020% U_3O_8 and .040% ThO_2 over 1.9 feet.

History of Development:

1954 - 1955: Geological, ground scintillometer and soil surveys and 24 drill holes were all completed by New Jersey Zinc Exploration Co. (Canada) Ltd.

1957: New Jersey Zinc Exploration Co. (Canada) Ltd. merged with others in the Rio Tinto Group to form Consolidated Fredrick M.L.

Principal References:

Robertson, J.A.
1963: Moon Lake Uranium Mines Limited; p.70, *in* Geology of Townships 155, 156, 161, and 162, ODM, $\overline{\text{GR}}$ No. 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 22, New Jersey Zinc Exploration Company (Canada) Limited, 1954-55.
- Technical File No. 63A.303, New Jersey Zinc Exploration Company (Canada) Limited, 1954-55.
- Technical File No. 2.1575, Fort Norman Explorations Incorporated, 1974.
- SMDR File No. 001113.

Denison Mines Limited
(Patrick Uranium Mines Limited)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°26'20"N Longitude 52°55'05"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

At the surface, Mississagi quartzite of the Hough Lake Group is well exposed, striking east and dipping gently north.

At depth Matinenda arkose and quartzite lie unconformably on Kewatin greenstone which was intersected at 2,309 feet by hole No.1. In hole No.1, radioactive pyritic conglomerate pebble bands were intersected at 2,059, 2,070, and 2,115 feet for an average thickness of 3.5 feet.

Economic Features:

At depths of 1,049.5 to 1,052 feet, chalcopyrite, pyrite and pyrrliotite numeralization assayed. 1,290 copper over 295 feet; trace amounts of gold and cobalt were also indicated.

History of Development

1954-55: Drill holes p-2 and p-3, totalling 1,444 feet located at 330 feet and 1,650 feet northwest of p-1 respectively.

Work was completed by Picton Uranium Mines Limited.

Drill hole p-1 to 2,309 feet, a joint hole by Picton Uranium and Brunette Porcupine Gold Mines Limited.

1967: Claims owned by Denison Mines Limited.

Principal References:

Robertson, J.A.
1963: Picton Uranium Mines Limited; p.72-73 in Townships 155, 156, 161, 162, Ontario Department of Mines, Geological Report No.13, 88p. Accompanied by Maps 2014, 2015, 2026 and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Technical Report No. 63.2264, Dension Mines Limited, 1967
- Drill Log Report No.38, Picton Uranium Mines Limited, 1955
- SMDR File No. 000129

Pistol Lake Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°22'00"N Longitude 82°51'22"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

Minor intersections of radioactive quartz-pebble conglomerate bands of the Matinenda Formation of the Elliot Lake Group were intersected by three drill holes.

Economic Features:

Average assay results were 0.026% U_3O_8 over 1.0 feet.

The radioactive beds were intersected at 139.0, 464.5, and 488.0 feet. (OGS, AFRO, Toronto, Timmermans Township, DLR No. 19).

History of Development:

1954 - 1958: Geological and geophysical surveys and 13 drill holes totalling 4,682 feet. Work by Algoma Uranium Mines Limited.

1958: Claims were allowed to lapse.

Principal References:

Robertson, J.A.
1963: Algom Uranium Mines Limited, Group I, Pistol Lake; p.54, in Townships 155, 156, 161, and 162, ODM, Geological Report No. 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Drill Log Report No. 19, Algom Uranium Mines Limited, 1954.
- SMDR File No. 000130.

Zenmac Metal Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Location:

Latitude 46°24'00"N Longitude 82°53'10"W
Timmermans Township
Map Reference: ODM Map 2026

Geology:

The central portion of this area is underlain by massive dioritic gabbro at the east end of the Matinenda sill-like intrusion. The southern part shows well-bedded Matinenda quartzite dipping at about 10° south. The northern part is water claims.

Three drill holes were located on the north shore of Bakers Bay. These intersected radioactive oligomictic conglomerate beds at 467.5, 483.5 and 506.0 feet averaging 6.3 feet in width and 5.1 times the background radioactivity.

History of Development:

1954: Two drill holes totalling 1,153 feet were drilled by Zenmac Metal Mines Limited.

1955: One drill hole, 752 feet in depth, located about 3,000 feet west of Zenmac hole No. II-2. Work was completed by Stancan Uranium Corporation. Stanrock Uranium Mines Limited later acquired Stancan Uranium Corporation.

1973: Stanrock Uranium Mines Limited amalgamated with Denison Mines Limited.

Principal References:

Robertson, J.A.
1963: Zenmac Metal Mines Limited; p.78, in Townships 155, 156, 161, and 162, ODM, Geological Report No. 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 27, Zenmac Metal Mines Limited, 1954.
- Timmermans Township, Drill Log Report No. 30, Stancan Uramium Corporation, 1955.
- SMDR File No. 000131.

Pitchore Uranium Mines Limited Prospect

Commodity:

Uranium, copper

Radioactive Minerals:

Unknown

Location:

Latitude 46°52'30"N Longitude 84°13'30"W
Shields and Tupper Townships
Map Reference: OGS Map 2419

Geology:

Uranium mineralization is associated with veins of quartz chalcopyrite with traces of pyrite hematite and carbonate included in the diabase and granite.

The mineralized zone extends over a strike length of 460 feet.

Economic Features:

Assays results from drilled samples averaged 0.076% U_3O_8 over 5.7 feet (MR Circular No. 12, 1969, p.69).

History of Development:

1954 - 1955: Trenching, magnetic, scintillometer surveys, and 25 drill holes totalling 6,133 feet were carried out by Pitchore Uranium Mines Limited.

Principal References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake: Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Pitchore Uranium Mines Limited; p.51, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Survey of Mines (1956) Pitchore Uranium Mines Limited; p.319, in Financial Post Survey of Mines, published by MacLean-Hunter Publishing Co. Ltd., Survey of Mines (1957) Pitchore Uranium Mines Limited; p.339, *in* Financial Post Survey of Mines, published by MacLean-Hunter Publishing Co. Ltd.,

OGS, AFRO, Toronto - Technical File No. 63.666, Pitchore Uranium Mines Limited, 1955.

Vankoughnet Township

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 46' 00" W Longitude 84° 47' 45" W
Vankoughnet Township
Map Reference: OGS Map 2419

Geology:

The radioactive zones consist of narrow limonite-stained fractures which consist of quartz and feldspar, and tiny breccia fragments of quartzite. They range in thickness from 5 to 15 cm and can be traced on strike for about 6 m. Three parallel zones occur on a steep hillside across a horizontal distance of about 12 m. The zones strike 290° and dip 30 to 35° north.

Economic Features:

Three samples collected from the thickest zone analysed 40, 67 and 87 ppm U_3O_8 with less than 10 ppm ThO_2 in each.

Principal References:

Lovell, H.L.; and Ploeger, F.R.
1979: 1978 Report of the Northeastern Region Sault Ste. Marie Geologist; p.89-99, in Annual Report of the Regional and Resident Geologists, 1978, edited by C.R. Kustra, OGS, MP 84, 135p.

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie- Elliot Lake: Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Gaitwin Explorations Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°40'00"N Longitude 82°40'32"W
Viel Township
Map Reference: OGS Map 2305

Geology:

The sediments belong to the Lorrain Formation of the Cobalt Group and strike locally northeast and dip 45°SE. Uranium mineralization occurs in ferruginous feldspathic conglomerate occurring in a bed approximately five feet wide and extends 1,100 feet.

Economic Features:

Geiger counter readings showed radioactivity up to five times the background along this bed. (OGS, AFRO, Toronto, Technical File No. 63A.171).

History of Development:

1953 - 1955:	A geological survey and one drill hole drilled to 900 feet were completed by Gaitwin Explorations Limited.
1969:	Combined airborne magnetic and electromagnetic surveys were carried out by A. St. Denis.
1976:	This occurrence is currently unstaked.

Principal References:

Wood, J.
1975: Gaitwin Explorations Limited; p.58, in Geology of the Rawhide Lake Area, ODM, Geoscience Report No. 129, 67p.

OGS, AFRO, Toronto - Viel Township, Drill Log Report No. 12, 1955.
- Technical File No. 63A.171, 1953.
- Technical File No. 63.2477, 1969.
- SMDR File No. 000030.

Mattaini, C. and B. Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°38'53"N Longitude 82°37'58"W
Viel Township
Map Reference: ODM Map 2305

Geology:

This occurrence lies in the Southern Structural Province and is underlain by Middle Precambrian Huronian Metasediments.

A differentiated Nipissing diabase sill intrudes Lorrain Formation comprising interbedded quartzite and hematitic radioactive conglomerate. (ODM, MR No. 9, 1968).

Grandiorite zones in the diabase contain scattered chalcopyrite, pyrite, bornite, and specularite. Some of the zones intersected in drilling are radioactive up to 15 times the background.

Economic Features:

Assays from 10 radioactive zones, averaging 2.5 feet were 0.09% U_3O_8 (radiometric equivalent). (OGS, AFRO, Toronto, Veil Tp., Drill Log Report No. 13).

History of Development:

1954: An airborne radiometric survey was carried out by Carl and Blanche Mattaini.

1955: Eight pits, four inclined drill holes totalling 2,048 feet, and two vertical drill holes totalling 2,480 feet were completed by Belfast Mines Limited.

Principal References:

Robertson, J.A.
1968: Mattaini Occurrence; p.12, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Wood J.
1975: Mattaini Occurrence; p.56,58, in Geology of the Rawhide Lake Area, District of Algoma, Ontario Division of Mines, Geoscience Report No. 129, 67p. Accompanied by Maps 2305 and 2306, scale 1 inch to 1/2 mile.

Rawhide "U" Mines Limited Occurrence

Commodity:

Thorium and uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°38'18"N Longitude 82°38'05"W
Viel Township
Map Reference: ODM Map 2305

Geology:

The Lorrain Formation of the Cobalt Group sediments have been intruded by Nipissing diabase.

Two areas of mineralization some 200 to 250 feet apart were located near the western boundary of former claim S150104. The quartzite in this area has been hematized near the contact with a diabase sill.

Economic Features:

Drilling intersected feldspathized diabase, assay samples taken here were 0.02% U_3O_8 over 1.4 feet and 0.02% ThO_2 over five 5 feet. (MDS Ottawa, File U2, 41J/10, Feb. 1969).

History of Development:

1954: Airborne radiometric survey by Aerosint Exploration Syndicate.

1968: Geological, ground radiometric surveys, and four drill holes totalling 1,002 feet were completed by Rawhide "U" Mines Limited.

Principal References:

Mineral Development Sector, Dept. of Energy, Mines and Resources, Ottawa National Mineral Inventory File U2, 41J/10, Rawhide "U" Mines Limited, Feb. 1969).

Wood, J.
1975: Rawhide "U" Mines Limited; p.55 and 58, in Geology of the Rawhide Lake Area, ODM, Geoscience Report No. 129, p. Accompanied by Maps 2305 and 2306, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - SMDR File No. 001114.

Name and Location:

Arco Triller No.2
Latitude 46° 33' 54" N Longitude 82° 57' 50" W
Albanel Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Leahy, E.J.
1973: Township 169 in Diamond Drilling in the Huronian Supergroup, Sault Ste. Marie-Elliot Lake Area, Algoma District, Ontario; Ontario Division of Mines Open File Report No. 5093, with Map P. 753.

OGS, AFRO, Toronto - Technical File No. 63.2213, Triller Explorations Limited, 1967.
- Albanel Township, Drill Log Report No. 16, Atlantic Richfield Company, 1968.
- Technical File No. 2.1575, Fort Norman Explorations Limited, 1974.

Remarks:

Drill hole No.2 by Arco Triller intersected the Huronian sequence from the Espanola, Bruce, and Mississagi Formation to Early Precambrian basement at 4,082 feet. Sections between 3,010 and 3,012 feet assayed 0.03% U_3O_8. (Marginal notes ODM Map P.1002)

In 1968 a ground magnetometer survey and two drill holes totalling 4,577 feet was completed by Arco Triller Explorations Limited.
In 1974 a multi-sensor airborne geophysical survey was completed by Fort Norman Explorations Incorporated.

Name and Location:

Peerless Uranium Mining Corporation Limited
Latitude 46° 22' 43" N Longitude 82° 47' 16" W
Bolger Township

References:

Canadian Mines Handbook; Peerless Uranium Mining Corporation Limited in Canadian Mines Handbook 1968-1969, p.268, published by the Northern Miner Press, 1968.

Robertson, J.A.
1963: Peerless Uranium Mining Corporation Limited, Group No.1, Mather Lake; p.72, in Townships 155, 156, 161, and 162; ODM, Geoligcal Report No.13, 88p. Accompanied by Map 2104, 2015, 2026, and 2027, scale 1 inch to ¼ mile.

OGS, AFRO, Toronto - Technical File No. 63A. 244, Peerless Uranium Mining Corporation Limited.
- Bolger Township, Drill Log Report No.12, Peerless Uranium Mining Corporation Limited, 1955.

Remarks:

Two northwest striking faults, one the southeast continuation of the Moon Lake fault, and a north striking fault, lying close to the east boundary cross the area. Drilling indicated a maximum of 135 feet of arkose considered to be the equivalent of the Matinenda Formation of the Elliot Lake Group. A number of thin oligomictic conglomerate bands were intersected but were only slightly radioactive.

Name and Location:

Sowerby
Latitude 46°18'30"N Longitude 83°23'15"W
Day Township

References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Sowerby Occurrence; p.4, in Uranium and Thorium Deposits of Northern Ontario; ODM, MRC No. 9, 106p.

Remarks:

Spotty mineralization occurs in Nipissing diabase and the Gowganda Formation adjacent to the contact or as brecciated inclusions. The mineralization includes copper, Co, Ni, and uranium.

Radioactive minerals present include pitchblende and uranophane.

Name and Location:

Duncan Township
Latitude 46° 37' 30" N Longitude 84° 07' 00" W
Duncan Township

References:

Frarey, M.J.
1977: Geology of the Huronian Belt Between Sault Ste.Marie and Blind River, Ontario; Geological Survey of Canada, Memoir 383, 87p. Accompanied by Maps 1412A, 1413A, 1414A, and 1415A, scale 1:50,000.

Giblin, P.E and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudnury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 ich to 4 miles.

Remarks:

This occurrence is situated in the quartz-pebble conglomerate of the Matinenda Formation of the Elliot Lake Group.

Name and Location:

Maud Lake
Latitude 46°36'30"N Longitude 84°08'50"W
Duncan Township

References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Frarey, M.J.
1977: Geology of the Huronian Belt Between Sault Ste. Marie and Blind River, Ontario, GSC Memoir 383.

Robertson, J.A.
1968: Maud Lake Occurrence; p.5, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Remarks:

There are several showings of uraniferous quartz-pebble conglomerate along the east shore of Maud Lake. This unit consists of conglomerate, arkose and greywacke. The individual beds are no thicker than two feet and total thickness is 15 feet.

Name and Location:

Canuc Mines Limited
Latitude 46° 26' 04" N Longitude 82° 20' 32" W
Gaiashk Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Districts of Algoma, Sudbury, and Manitoulin; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Mineral Development Sector, Department of Energy, Mines and Resources, Ottawa, National Inventory File U2, 41, J/8, Anticline Point, September 1962.

Robertson, J.A.
1962: British Explorers (1953) Limited; p.71, in Geology of Townships 137 and 138; Ontario Department of Mines, Geological Report No. 10, 94p.

OGS, AFRO, Toronto - Gaiashk Township, Drill Log Report No. 17, British Columbia Explorers, 1954.
- Technical File No. 63.419, Pronto Uranium Mines Limited, 1957.
- Technical File No. 63.2286, Canuc Mines Limited, 1968.
- SMDR File No. 001132.

Remarks:

The Precambrian country rock consists of mainly Huronian sediments of the Quirke syncline with Kenweenawan diabase.

In 1954 assay results from a drill core between the 105.5 and 106.7 foot mark averaged 0.01% U_3O_8. Results from drill log report No. 17, between the 527 and the 527.5 foot mark were 0.017% U_3O_8.

Between 1954 and 1968 1 drill hole to 574 feet was drilled and there were numerous geophysical surveys carried out.

Name and Location:

Alur Mines Limited
Latitude 46° 49' 10" N Longitude 83° 59' 00" W
Gaudette Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie - Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Rivers-Creighton Group; p. 135, in Canadian Deposits Of Uranium and Thorium, Geological Survey of Canada, Econ. Geol. Ser. No. 16, (interim Account), 173 p.

Survey of Mines, published by the MacLean Hunter Publishing Company Limited, p. 225.

OGS, AFRO, Toronto - Technical File No. 63A.75, 1949.
- SMDR File No. 000003.

Remarks:

There are several fractured Keweenawan diabase dikes in the area that are marked by the presence of iron carbonate. One dike on the southeast corner of claim AC4121 is crossed by a carbonated shear which is radioactive.

A sample assayed 0.07% U_3O_8(RE).
Prospecting and geologic mapping was carried out by Alur Mines in 1949.

Name and Location:

International Mining and Development Corporation
Latitude 46° 22' 50" N Longitude 82° 39' 43" W
Gunterman Township

References:

Prasad, N.
1981: International Mining and Development Corporation; p.74, *in* Distribution of Uranium and Thorium Occurrences in Canada; Department of Energy, Mines, and Resources, Ottawa, Geological Survey of Canada, Open File Report No. 551, 124p.

Robertson, J.A.
1968: International Mining and Development Corporation; p. 132, *in* Geology of Township 149 and Township 150, ODM, Geological Report No. 57, 162p. Accompanied by Maps 2113 and 2114. Charts A,B,C,D, and E.

Remarks:

One outcrop of Lower Mississagi Formation arkose with oligomictic pebble bands extends into the area from Rio Algom Limited's Nordic Group.

The arkose carries 0.02 and 0104% U_3O_8 and the pebble bands (6 inches to 1 foot thick) 0.003 and 0.07% U_3O_8.

Name and Location:

Thorncrest Explorations Limited
Latitude 46°25'21"N Longitude 82°40'27"W
Gunterman Township

References:

Prasad, N.
1981: Thorncrest; p.73, in Distribution of Uranium and Thorium Occurrences in Canada, Dept. of Energy, Mines and Resources, GSC, OFR No. 551, 124p.

Robertson, J.A.
1968: Thorncrest Explorations Limited; p.141-143, in Geology of Township 149 and Township 150, ODM, GR No. 57, 163p. Accompanied by Maps 2113 and 2114, scale 1 inch to 1/4 mile, and charts A.B.C.D, and E.

Remarks:

Radioactivity was found in the conglomerate of the Gowganda Formation.

Name and Location:

Reserve Lake Occurrence
Latitude 46°39'00"N Longitude 84°10'30"W
Jarvis Township

References:

Robertson, J.A.
1968: Reserve Lake Occurrence; p.5-6, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Geology:

Mineralization occurs in shear zones in granite.

Two samples taken by M.C. Gardener of Haileybury, Ontario, assayed 0.034 and 1.36% U_3O_8 (radiometric equivalent).

Name and Location:

Desbarats Mining Company Limited
Latitude 46° 23' 06" N Longitude 83° 55' 32" W
Johnson Township

References:

Frarey, M.J.
1962: Marginal Notes on Map 32-1962, Bruce Mines Limited published by the Geological Survey of Canada.

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Survey of Mines, Desbarats Mining Company Limited; p.203, in Financial Post Survey of Mines, published by McLean Hunter Publishing Company Limited, 1957.

OGS, AFRO, Toronto - Johnson Township, Drill Log Report Nos. 10 and 11, Desbarats Mining Company Limited, 1956.

Remarks:

Radioactive veins in diabase reportedly occur on the northeast shore of Desbarats Lake.

Name and Location:

Fano Uranium Mines Limited
Latitude 46° 21' 34" N Longitude 82° 57' 26" W
Juillette Township

References:

Robertson, J.A.
1963: Fano Mining and Exploration Incorporated; p.63, in Geology of Townships 155, 156, 161, and 162; ODM, Geological Report No. 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to ¼ mile.

OGS, AFRO, Toronto - Juillette Township, Drill Log Report No. 14, Fano Uranium Mines Limited, 1955.
- Technical File No. 63.2800, D.S. Robertson and Associates Limited, 1970.
- SMDR File No. 000133.

Remarks:

This occurrence is underlain by feldspathic quartzite, conglomerate and arkose of the Matinenda Formation of the Elliot Lake Group. A 6 inch band of oligomicitc conglomerate was intersected in one of the drill holes by Fano Uranium Mines Limited in 1955, and indicated a radioactivity count of 2 to 3 times the background.

In 1970 D.S. Robertson and Associates completed an airborne electromagnetic and magnetic survey over the area.

Name and Location:

Matinenda Uranium Mines Limited
Latitude 46° 22' 00" N Longitude 83° 03' 40" W
Juillette Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto
- Juillette Township, Drill Log Report Nos. 12 and 13, 1955.
- Technical File No. 63.2394, Radex Syndicate, 1968.
- SMDR File No. 000134.

Remarks:

Thin seams and beds of conglomerate with minor pyrite, chalcopyrite with radioactivity up to 5 times the background were intersected in 2 drill holes. A pyritized seam at 2,020 feet gave a radioactivity count of 9 times the background.

Two drill holes totalling 4,851 feet were drilled by Matinenda Uranium Mines Limited in 1955.

Name and Location:

Blind River
Latitude 46° 29' 20" N Longitude 83° 01' 50" W
Kamichisitit Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

The Northern Miner, Vol. 62, No.28, Sept. 23,1976, p.C.17., Published by the Northern Miner Press Limited.

The Northern Miner, Vol. 62, No.32, Oct. 21, 1976, p.11., Published by the Northern Miner Press Limited.

OGS, AFRO, Toronto - Technical File No. 63.2303, Pacific Petroleum Limited, 1968.
- Technical File No. 2.1576, Superior Northwest Incorporated, 1974.
- Kamichisitit Township, Drill Log Report No. 30, Superior Northwest, 1976.

Remarks:

Surface exposures consist of conglomerate, quartzite and arkose of the Gowganda Formation of the Cobalt Group. A deep drill hole intersected a 90 foot bed a radioactive conglomerate, the best section of which assayed 0.017% U_3O_8 over 18.6 feet.

In 1968 airborne magnetic and electromagnetic surveys were completed by Pacific Petroleums Limited.

In 1975 airborne magnetic, electromagnetic, radiometric, and resistivity surveys and two diamond drill holes totalling 4,965 feet were completed by Superior Northwest Incorporated.

Name and Location:

Kirkwood Township
Latitude 46° 20' 26" N Longitude 83° 28' 24" W
Kirkwood Township

References:

Bennett, G.
1976: Huronian Volcanism in the Thessalon Area, District of Algoma; p. 111-113, in Summary of Fieldwork, 1976 by the Geological Branch, edited by V.G. Milne, W.R. Cowan, K.D. Card, and J.A. Robertson, Ontario Div. Mines, MP 67, 183p.

Remarks:

A bed a quartz-pebble conglomerate and arkosic grit about 30 centimetres thick occurs within coarse-grained pink-to-grey arkose 2,000 metres south of Kirkwood Lake.

The conglomerate contains about 15% fine pyrite and is radioactive up to 10 times the background.

The conglomerate is located within mafic volcanic rocks near the base of the Thessalon Formation.

Name and Location:

Huclif Porcupine Mines Limited
Latitude 47° 27' 00"n Longitude 84° 29' 10" W
Labonte Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, ODM, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Technical File No. 63.587, Huclif Porcupine Mines Limited, 1955.
- SMDR File No. 000053.

Remarks:

Radioactivity is associated with pegmatites within Early Precambrian granite gneiss. The granitic gneisses are cut by numerous SE-SW trending Keweenawan diabase dikes. These pegmatites gave geiger counter readings of 2 to 2.5 times the background.

In 1954 geophysical surveys were completed by Matachewan Canadian Gold Limited.

In 1955 geophysical surveys, sampling, and drilling was completed by Huclif Porcupine Mines Limited.

Name and Location:

Jalore Mining Company Limited
Latitude 47°21'40"N Longitude 84°35'05"W
Labonte Township

References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Alogma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Jalore Mining Co. Limited; p.52, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto
- Labonte Township, Drill Log Report, Jalore Mining Company, Jupiter Group, 1949.
- Technical File 63A.137, Jalore Mining Co. Limited, 1952.
- Technical File 2.2270, R.A. MacGregor, 1976.
- Technical File 2.2588, R.A. MacGregor, 1978.
- SMDR File No. 000054.

Remarks:

Radioactivity is associated with a zone of calcite-hematite stringers within a northeast-trending Keweenawan diabase dike.

The radioactive zone, 10 to 12 feet wide, trends nearly at right angles to the diabase dike and extends for about 15 feet into granite on each side.

Uraninite was identified as the radioactive mineral. This deposit is of hydrothermal origin.

Name and Location:

Lapaska Mines Limited
Latitude 47° 20' 16" N Longitude 84° 35' 00" W
Labonte Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Lapaska Mines Limited; p.53, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.76, Lapaska Mines Limited, North Group, 1949.
- SMDR File No. 000055.

Remarks:

Radioactivity is present in a fracture zone in or near the contact of a Keweenawan diabase dike and the Early Precambrian granite complex. The diabase dike, approximately 70 feet wide strikes N 40° E and dips vertically. The 3 foot wide fracture zone strikes N 50° W and dips 38° SW. The fractures in the fracture zone are narrow and filled with calcite, hematite and probably pitchblende. Radioactivity readings were up to 5 times the background.

Name and Location:

D.L. McDevitt
Latitude 47°19'50"N Longitude 84°35'00"W
Labonte Township

References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: D.L. McDevitt Occurrence; p.18, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.93, F. Joubin, 1949.
- SMDR File No. 000057.

Remarks:

Radioactive anomalies are located in pegmatitic intrusions within an Early Precambrian granite and syenite complex. All the rocks are exposed in a 100 to 200 foot high vertical scarp.

No. 1 showing consists of a branching fracture, striking N 75° E and dipping 70° N in red pegmatite. The fracture is exposed for a length of 20 feet and is from 12 to 18 inches wide. A sample across 18 inches assayed 0.10% U_3O_8.

No. 2 showing consists of a single flat dipping fracture in grey pegmatite. Near the fracture there is a band of coarse grained biotite mica that is partly chloritized and is radioactive.

No. 3 showing consists of uranium oxide stain on a weakly grey coloured pegmatite.

Name and Location:

E.O. Tooker
Latitude 47° 19' 40" N Longitude 84° 31' 40" W
Labonte Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts: Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Tooker Occurrece; p. 53, *in* Canadian Deposits of Uranium and Thorium (Interim Account) Geol. Surv. Can., Econ. Geol. Series No. 16, 173p.

Remarks:

This occurrence is situated in Superior Provincial Park.

Name and Location:

Kirkpatrick Lake
Latitude 46° 39' 44" N Longitude 83° 01' 10" W
Lecaron Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie- Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Lecaron Township, Drill Log Report Nos. 10 and 11, Blue Lake Mining Syndicate Limited, 1954.
- SMDR File No. 000035.

Remarks:

This occurrence is underlain by an outlier of the Lorrain Formation which consists of quartzite and thin hematitic, weakly radioactive conglomerate, overlying the Gowganda Formation and Early Precambrian granite.

Radioactivity in two thin conglomerate beds was less than 2 times the background.

In 1954 geological mapping and 2 drill holes totalling 1,149 feet were completed on claim SSM27552 and 275555 by Blue Lake Mining Syndicate Limited.

Name and Location:

H.E. Frye
Latitude 46° 17' 16" N Longitude 83° 42' 16" W
Lefroy Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, ODM, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - SMDR File No. 000009.

Remarks:

This occurrence is underlain chiefly by rocks of the Mississagi Formation of the Hough Lake Group. Feldspathic quartzite with a few thin radioacitve pebble beds can be found in the upper 50 feet.

In 1955 a drill hole totalling 1,405 feet was drilled by H.E. Frye.

Name and Location:

Webb
Latitude 46° 20' 50" N Longitude 83° 41' 25" W
Lefroy Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Webb Occurrence; p.7, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

Remarks:

A sheared quartzite lies adjacent to the Murray Fault. The shear zone is exposed over a length of 5 to 10 feet. Assays of the outcrop material is 0.02% U_3O_8.

Name and Location:

Bracemar Mines Limited
Latitude 46° 27' 41" N Longitude 82° 26' 01" W
Lehman Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Bracemar Mines Limited; p. 65, in Geology of Townships 137 and 138, ODM, Geological Report No.10, 94p.

OGS, AFRO, Toronto - Lehman Township, Drill Log Report No. 18, Bracemar Mines Limited, 1955.
- Lehman Township, Drill Log Report No. 20, Kerr McGee Corporation, 1968.
- SMDR File No. 000080.

Remarks:

Quartz-pebble conglomerate bands with radioactivity up to 2 times the background were intersected at 3,031 and 3,066 feet with an average thickness of 3 feet.

In 1955 1 drill hole totalling 3,216 feet was drilled on claim S67166 by Bracemar Mines Limited.
In 1966 and 1968 airborne magnetic, electromagnetic surveys and 1 drill hole to 4,946 feet was completed by Kerr-McGee Corporation.

Name and Location:

Black Lake
Latitude 46° 16' 45" N Longitude 82° 52' 55" W
Mack Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, sclae 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Black Lake;p.9, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - Mack Township, Drill Log Report No. 15, Harico Mining and Development Company Limited, 1954.
- Technical File No. 63.2201, Denison Mines Limited, 1967.
- SMDR File No. 000014.

Remarks:

Radioactivity up to 4 times the background have been reported from sheared argillites of the Pecora Formation of the Hough Lake Group.

Name and Location:

Seabrook Lake
Latitude 47°00'00"N Longitude 83°17'00"W
Maeck Township

References:

Sage, R.P.
1976: Carbonatite-Alkalic Complexes; p.56-79, in Summary of Fieldwork, 1976, by the Geological Branch, edited by V.G. Milne, W.R. Cowan, K.D. Card, and J.A. Robertson, Ontario Division of Mines, MP 67, 183p.

Thurston, P.C.; Siragusa, G.M.; and Sage, R.P.
1977: Geology of the Chapleau Area, Districts of Algoma, Sudbury, and Cochrane; Ontario Division of Mines, Geoscience Report 157, 293p. Accompanied by Maps 2351 and 2352, scale 1:250,000, and Map 2221, scale 1 inch to 4 miles (1:253,440).

Remarks:

The complex consists of two rock types, carbonatite and ijolite. The carbonatite occurs in the northern part of the complex. In the southern ijolite portion the rock composition varies from pyroxenite to pegmatitic segregations of urtite.

These portions are enveloped by a zone of fenetized granite breccia and again by fenitized granite.

Name and Location:

Firesand River
Latitude 47° 59' 00" N Longitude 84° 39' 40" W
McMurray and Lastheels Townships

References:

Parsons, G.E.
1961: Niobium-Bearing Complexes East of Lake Superior Ontario Department of Mines, Geological Report p. 3, 73p. Accompanied by Map 2006, scale 1 inch to ¼ mile.

Robertson, J.A.
1981: The Uranium Deposits of Ontario - Their Distribution and Classification; Ontario Geological Survey, Miscellaneous Paper 86, 37 p.

Sage, R.P.
1977: Carbobatite-alkalic Complex, District of Algoma; p.71-72, in Summary of Fieldwork 1977, by the Geological Branch, edited by V. G. Milne, O.C. White, R.B. Barlow, and J.A. Robertson, 208p.

Remarks:

This carbonatite complex consists of a dolomite-rich core and a calcite-rich border. (Parsons et al 1961) The complex consists almost exclusively of carbonatite rocks and ijolite and nepheline syenite.

Name and Location:

T. Surluga
Latitude 47° 57' 55" N Longitude 84° 44' 03" W
McMurray Township

References:

Lang, A.H.
1952: Surluga Property; p.135, in Canadian Deposits of Uranium and Thorium (Interim Account), Geol. Surv. Canada, Econ. Geol. Ser. No.16, 173p.

Milne, V.G., Giblin, P.E., Bennett, G., Thurston,P., Wolfe, W.J., Giguere, J.F., Leahy, E.J., and Rupert, R.J.
1972: Manitouwadge-Wawa Sheet; Algoma, Cochrane, Sudbury, and Thunder Bay: Ontario Division of Mines, Geological Compilation Series Map 2220, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: T. Surluga Occurrence; p.53, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No.9, 106p.

Remarks:

Radioactive mineralization occurs in a pegmatite dike intruding an Early Precambrian granite complex. A sample from the dike assayed 0.10% U_3O_8.

Location and Name:

Russian Lake
Latitude 46°45'44"N Longitude 82°12'00"W
Monestine Township

References:

Sherran, H.W.
1952: Geology of Lac Aux Sables-Shakawa Lake Area, ODM, Preliminary Report 1952-2, p.4.

Geology:

This occurrence is underlain by Early Precambrian granite which is intruded by Keweenawan diabase dikes.

Radioactivity three times the background count was obtained near Russian Lake.

(ODM, Preliminary Report 1952-2, p.4).

Name and Location:

Demorest Lake
Latitude 46° 22' 28" N Longitude 83° 05' 18" W
Montgomery Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie- Elliot Lake, Algoma, Manitoulin, and Sudbury Districts; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Rio Tinto Canadian Explorations Limited; p.10, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000015.

Remarks:

Two thin bands of uraniferous, pebbly, feldspathic quartzite of the Matinenda Formation of the Elliot Lake Group were intersected at 3,562 feet below the surface.

Assays gave the following results;

Footage			
3,516 - 3,517	1.0	0.11% U_3O_8	0.22% ThO_2
3,562 - 3,563.8	1.8	0.07% U_3O_8	0.14% ThO_2

Wakefield Uranium Mines Limited drilled a hole to 1,358 feet which Rio Tinto Canadian Explorations Limited deepened to 3,946 feet in 1966.

Name and Location:

W.D. Sutherland and Associates
Latitude 46° 32' 22"N Longitude 83° 36' 10" W
Morin Township

References:

Chandler, F.W.
1973: W.D. Sutherland and Associates; p. 60, in Geology of McMahon and Morin Townships, District of Algoma; ODM Geological Report No. 112, 77p. Accompanied by Map 2272, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Morin Township, Drill Log Report No. 10, W.D. Sutherland and Associates, 1968.
- Technical File No. 63.2490, 1969.
- SMDR File No. 000016.

Remarks:

Locally, rocks of the Matinenda Formation are overlain by rocks of the Ramsay Lake and Mississagi Formations.

In 1968 W.D. Sutherland and Associates drilled 6 holes and encountered uranium in quartz-pebble conglomerates.

Name and Location:

Boymar Gold Mines Limited
Latitude 46° 33' 08" N Longitude 82° 47' 58" W
Raimbault Township

References:

Robertson, J.A.
1977: Nicholas and Raimbault Townships, Algoma District; Ontario Division of Mines, Geological Map 2347, scale 1:31,680 or 1 inch to ½ mile.

OGS, AFRO, Toronto - Raimbault Township, Drill Log Report No. 13, Boymar Gold Mines Limited, 1954.
- Technical File No. 63.2469, Hollinger Mines Limited, 1968.
- Technical File No. 63.2491, Hollinger Mines Limited, 1969.
- SMDR File No. 000119.

Remarks:

Uranium mineralization is associated with narrow pyritic pebble bands found in the green arkose of the Mississagi Formation of the Elliot Lake Group. The best assay values from samples taken by Hollinger Mines were 0.01% U_3O_8 (RE)

In 1954 15 drill holes totalling 4,590 feet were drilled by Boymar Gold Mines Limited.

In 1968 and 1969, ground and airborne magnetic, electromagnetic, and radiometric surveys were completed by Hollinger Mines Limited.

Name and Location:

Gods' Lake Mines Limited
Latitude 46° 33' 38" N Longitude 82° 49' 08" W
Raimbault Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, ODM, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Raimbault Township, Drill Log Report No. 11, God's Lake Mines Limited, 1954.
- Technical File No. 2.1575, Fort Norman Explorations Incorporated, 1974.
- Techncial File No. 63.2581, Astonish Uranium Mining Corporation Limited, 1969.
- SMDR File No. 000132.

Remarks:

Slightly radioactive, thin pebble beds within an arkosic matrix, containing sparse pyrite and chalcopyrite belonging to the Mississagi Formation was intersected in drilling. The best geiger counter reading was 460 CPM over 1.5 feet.

God's Lake Mines Limited completed radiometric surveys and 6 drill holes in Nicholas and Raimbault townships.

Name and Location:

Zenmac Metal Mines Limited
Latitude 46°32'39"N Longitude 82°47'16"W
Raimbault Township

References:

Giblin, P.E.; and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1969: Nicholas and Raimbault Townships, Algoma District; Ontario Division of Mines, Geological Map 2347, scale 1:31,680 or 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Raimbault Township, Drill Log Reports No. 10 and 12, Zenmac Metal Mines Limited, 1954.
- Regional Geologists' Files, Raimbault Township, File No. SSM 421, Zenmac Metal Mines Limited, 1954.
- SMDR File No. 000120.

Remarks:

Slightly radioactive pebble bands were found in the Mississagi Formation. At approximately 300 feet deep, radioactivity was four to eight times the background.

In 1954, two drill holes were drilled totalling 1,373 feet by Zenmac Metal Mines Limited.

Name and Location:

Falconbridge Nickel Mines Limited
Latitude 47° 14' 26" N Longitude 84° 37' 08w W
Rix Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Falconbridge Nickel Mines Limited; p.25, *in* Geology of the Montreal River Area, ODM, Annual Report Vol. 64 part 3, 32p. Accompanied by Map 1955-1, scale 1 inch to 1 mile.

Robertson, J.A.
1968: Falconbridge Nickel Mines Limited; p.25, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Rix Township, Drill Log Report, Falconbridge Nickel Mines Limited.
- SMDR File No. 000071.

Remarks:

Radioactive anomalies are located along the sheared contacts of a Keweenawan diabase dike and Early Precambrian granite. Pitchblende is associated with calcite and hematite gangue that fills fractures in the shear zone and in the diabase.

Name and Location:

F.D. Roche
Latitude 47° 14' 21" N Longitude 84° 36' 24" W
Rix Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Nuffield, E.W.
1955: Geology of the MOntreal River Area; Ontario Dept. Mines Vol. 64, Part 3, 32p. Accompanied by Map 1955-1, scale 1 inch to ½ mile.

Robertson, J.A.
1968: F.D. Roche Occurrence; p.25, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

Remarks:

The radioactive anomaly occurs in fractures at the contact of a Keweenawan diabase dike and Early Precambrian granite. The fractures occurring in the diabase are filled with a calcite-hematite gangue containing some pitchblende.

In 1949 some prospecting and stripping was carried out for Mr. F.D. Roche.

Name and Location:

E.B. James
Latitude 46° 56' 00" N Longitude 83° 16' 00" W
Rollins Township

References:

Giblin, P.E. and Leahy, E.J.
1979; Sault Ste Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: E.B. James Occurrence; p.129, in Canadian Deposits of Uranium and Thorium (Interim Account), Geological Survey of Canada, Economic Geology Series No.16, 173p.

Remarks:

In the northwest portion of the township there is an exposure of alkalic syenite carbonatite and related rocks of the Middle and Late Precambrian age. Few diabase dikes of Keweenanwan age are also present.

Two samples contained microscopic grains of sulphide minerals and showed 0.103% U_3O_8.

Name and Location:

Mount Lake Area
a. Latitude 46° 41' 00" N Longitude 82° 45' 25" W
b. Latitude 46° 41' 40" N Longitude 82° 44' 00" W
c. Latitude 46° 41' 10" N Longitude 82° 43' 50" W
d. Latitude 46° 38' 00" N Longitude 82° 43' 00" W
Sagard Township

References:

Robertson, J.A.
1968: Mount Lake Area;p.13, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No. 9, 106p.

1970: Poulin and Sagard Townships, Algoma District; Ontario Division of Mines, Geological Map 2346, scale 1:31,680 or 1 inch to ½ mile.

Remarks:

All thorium deposits are associated with the Lorrain Formation. It consists of interbedded quartzite and conglomerate. The conglomerate is thinly-bedded and hematitic. Radioactivity is usually 2 to 3 times the background.

a. Quebec Uranium Mining Corporation
b. Wakman, W.J. and Grinnicke, R.
c. Soderstrom and Hammerstrom
d. Silver Men Mines Limited

Name and Location:

R. Shunck
Latitude 46° 15' 10" N Longitude 82° 04' 00" W
Salter Township

References:

OGS, AFRO, Toronto - Technical File No. 2.2409, Report for R. Shunck, 1977.

Remarks:

The highest uranium assay obtained was 0.012% U_3O_8 from a bed of argillaceous quartzite that was 4 feet wide.

Name and Location:

Manwood Mining Corporation Limited
Latitude 47° 08' 12" N Longitude 84° 38' 57" W
Slater Township

References:

Robertson, J.A.
1968: Manwood Mining Corporation; p.53, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.80, Manwood Mining Corporation Limited, 1949.

Remarks:

Radioactive anomalies were encountered at the contact of Keweenawan diabase dikes and Early Precambrian granites. The deposit consists of 4 different showings. All are small and have low geiger counter readings.

In 1949 geolgical and radiometeric surveys, stripping and trenching was carried out by Manwood Mining Corporation Limited.

Name and Location:

Pennwood Gold Mines Limited
Latitude 47°13'30"N Longitude 84°37'40"W
Slater Township

References:

Robertson, J.A.
1968: Pennwood Gold Mines Limited; p. 24, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.67, Pennwood Gold Mines Limited, 1949.
- SMDR File No. 000066.

Remarks:

Radioactive anomalies occur at the sheared contact of Keweenawan diabase dikes and Early Precambrian granite. The contacts are filled with quartz and calcite stringers with a bright red stain due to the presence of hematite. Some radioactivity of up to eight times the background was found in the granites and pegmatites. Some uraninite and ellsworthite were identified.

Name and Location:

Ranrouyn Mines Limited
Latitude 47° 12' 59" N Longitude 84° 34' 14" W
Smilsky Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.
1952: Ranrouyn Group; p.132, in Canadian Deposits of Uranium and Thorium (Interim Account), Geological Survey of Canada, Econ. Geol. Series No. 16, 173p.

OGS, AFRO, Toronto - Technical File No. 63A.71, Ranrouyn Mines Limited, 1949.
- Technical File No. 63A.215, Ranrouyn Mines Limited, 1950.
- SMDR File No. 000044.

Remarks:

The radioactive anomalies occur in the Early Precambrian granites at or near the contact with northeast trending Keweenawan diabase dikes. Radioactivity was also associated with pegmatite veins and pegmatite boulders that contained small amounts of uraninite.
During 1949 and 1950 geological, ground magnetometer, and geiger counter surveys were completed by Ranrouyn Mines Limited.

Name and Location:

Madawanson Lake
Latitude 46° 36' 10" N Longitude 82° 10' 50" W
Strain Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Sheeran, H.W.
1952: Geology of the Lac Aux Sables-Shakawa Lake Area, ODM Preliminary Report 1952-2, p.4.

Remarks:

This occurrence is underlain by Early Precambrian granite which is intruded by Keweenawan diabase dikes. Radioactivity 3 times the background was obtained at the contact.

A grab sample showed 0.05% U_3O_8 (RE).

Name and Location:

Cyr
Latitude 46° 11' 45" N Longitude 82° 55' 48" W
Striker Township

References:

Robertson, J.A.

1964: Geology of the Scarfe, Mack, cobden, and Striker Townships; Ontario Department of Mines, Geological Report No. 20, 89p. Accompanied by Map 2028, scale 1 inch to ½ mile. Map 2032, scale 1 inch to 2 miles.

1968: Cyr Property; p.10, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - SMDR File No. 000018.

Remarks:

The arkose and conglomerate of the Matinenda Formation of the Elliot Lake Group rests on the Early Precambrian granite and dips 35° S.

The maximum thickness of the conglomerate is 2 feet. A grab sample assayed 0.02% U_3O_8.

In 1959 exploration was carried out in conjunction with the Cane property(to the south) by Pronto Uranium Mines Limited.

Name and Location:

Tarbutt Mines Limited
Latitude 46° 23' 16" N Longitude 83° 58' 04" W
Tarbutt Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste,. Marie-Elliot Lake; Algoma, Sudbury, and Manitoulin; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 mile.

Robertson, J.A.
1968: Tarbutt Mines Limited; p.11, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - SMDR File 000020.

Remarks:

Two carbonate veins occur in the diabase 1.5 feet apart and 80 feet long. The veins strike N 60° W and dip 87° N. Pitchblende is contained within the rocks.

Name and Location:

West Thessalon
Latitude 46° 16' 25" N Longitude 83° 29' 30" W
Thessalon Township

References:

Frarey, M.J.
1977: West Thessalon Township; p.79, in Geology of the Huronian Belt Between Sault Ste. Marie and Blind River, Ontario; Geological Survey of Canada Memoir 383, 87p. Accompanied by Maps 1412A, 1413A, 1414A, and 1415A, scale 1:50,000.

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Remarks:

There are quartz-pebble conglomerate beds at the top of the Livingstone Creek Formation and in the basal part of the Thessalon Formation. The beds are mildly radioactive.

Name and Location:

Anuwon Uranium Mines Limited
Latitude 46° 23' 52" N Longitude 82° 51' 18" W
Timmermans Township

References:

Giblin, P. E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1963: Anuwon Uranium Mines Limited; p. 56-58, in Townships 155, 156, 161, and 162; ODM, Geological Report No. 13, 88p. Accompanied by Maps 2014, 2015, 2026, and 2027, scale 1 inch to ¼ mile.

Survey of Mines (1956) New Bristol Oils Limited; p. 357, in The Financial Post Survey of Mines, published by MacLean Hunter Publishing Company Limited.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 23, Anuwon Uranium Mines Limited, 1955.
- SMDR File No. 000122.

OMNR, Regional Geologists Files, Sault Ste. Marie, SSM 424.

Remarks:

Minor intersections of radioactive quartz-pebble conglomerate beds with minor pyrite and radioactivity up to 8 to 10 times the background were encountered in drilling.

In one drill hole a 6.8 foot conglomerate bed encountered gave a radiometric reading of 0.013% U_3O_8. The beds are typically less than 8 inches thick.

Name and Location:

Fano Uranium Mines Limited
Latitude 46° 22' 19" N Longitude 82° 54' 34" W
Timmermans Township

References:

Robertson, J.A.
1963: Fano Mining and Exploration Incorporated; p.63, in Geology of Townships 155, 156, 161, and 162; ODM Geological Report No. 13, 88p. Accompanied by Maps 2014, 2015, 2026 and 2027, scale 1 inch to ¼ mile.

OGS, AFRO, Toronto - Timmermans Township, Drill Log Report No. 37, Fano Uranium Mines Limited, 1955
- SMDR File No. 000126.

Remarks:

This occurrence is underlain by feldspathic quartzite, conglomerate and arkose of the Matinenda Formation of the Elliot Lake Group. These sediments lie unconformably on Early Precambrian granites at depths ranging from 471 to 584 feet below the surface. These sediments strike northeast and dip gently south.

Scintillometer readings of oligomictic, uraniferous quartzite intersected in five drill holes averaged 3 times the background.

Name and Location:

Fort Norman Explorations Incorporated
Latitude 46° 25' 50" N Longitude 82° 51' 34" W
Timmermans Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1 inch to 4 miles.

OGS, AFRO, Toronto - Techncial File No. 63.2171, Cominco Limited, 1967.
- Technical File No. 2.1575, Fort Norman Explorations Incorporated, 1974.
- Technical File No. 2.1850, Fort Norman Explorations Incorporated, 1975.
- Timmermans Township, Drill Log Report No. 44, Fort Norman Explorations Incorporated, 1976-77.

Remarks:

Radioactivity was associated with the conglomerates and quartzites of the lower Matinenda Formation of the Elliot Lake Group.

Scintillometer readings on sections of the Matinenda Formation on drill cores of Fort Norman Explorations Incorporated, averaged 1.5 times the background. Chemical analyses showed less than 0.005% U_3O_8 and less than 0.005% ThO_2.

Between 1967 and 1977 geophysical surveys were carried out by Cominco Limited, Denison Mines Limited, and Fort Norman Explorations Incorporated. Fort Norman also drilled three holes totalling 4,374 feet.

Name and Location:

D. Weston
Latitude 46°39'32"N Longitude 82°36'24"W
Viel Township

References:

Wood, J.
1975: Geology of the Rawhide Lake Area, Ontario Division of Mines, Geoscience Report 129, 67p. Accompanied by Maps 2305 and 2306, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Technical File No. 63A.545, Weston & Company Incorporated, 1968.
- SMDR File No.

Remarks:

A radioactive zone in red to purple-coloured quartz-pebble conglomerate is approximately 40 feet long and 10 to 12 feet wide.

Radioactivity is reported up to 10 times the background.

Name and Location:

Crestland Mines Limited
Latitude 84° 53' 00" N Longitude 46° 43' 50" W
Whitman Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake; Algoma, Manitoulin, and Sudbury Districts; OMNR, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Crestland Mines Limited; p. 11, in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No. 9, 106p.

Remarks:

A carbonated, rusty shear zone was traced for 350 feet. A series of trenches up to 18 feet deep was dug. Assays ranged from 0.046% to 0.05% U_3O_8 (chem).

In 1948 trenching was performed by Consolidated Northland Mines Limited.

Name and Location:

Soweska River
Latitude 50° 24' 16" N Longitde 82° 33' 04" W
Habel Township

References:

OGS, AFRO, Toronto - Technical File No. 83-1-44, Algoma Central Railway and Hudson's Bay Railway, 1966.

Remarks:

Mineralization is associated with lignite beds.

Calmor Mines Limited Occurrence

Commodity:

Uranium and thorium

Radioactive Minerals:

Pitchblende and monazite.

Location:

Latitude 50° 09' 50" N Longitude 81° 37' 03" W
Pitt Township
Map Reference: ODM Map P. 370

Geology:

The uranium mineralization occurs predominantly in a carbonate vein averaging 0.5 feet wide and 240 feet long. It strikes north and dips 75° W. This vein cuts Early Precambrian gneiss, pegmatites and diabase. A second vein, 10 feet to the east strikes due north and dips 65-75° W, and is exposed for 70 feet. Both veins contain some specularite, pyrite, and chalcopyrite. This occurrence is on the escarpment that marks the northern edge of the exposure of Precambrian rocks and the southern edge of the Paleozoic rocks of the St. James Bay Basin.

Economic Features:

Three samples taken from the main vein assayed 0.03%, 0.12%, and 0.055% U_3O_8. (RE). (ODM Prelim. Report 1947-48, p.9)

History of Development:

1947: The vein was discovered by A. Mosher for Calmor Mines Limited.

1948: Moneta Porcupine Mines Limited carried out a detailed geiger counter survey and a geological reconnaissance survey.

Principal References:

Hogg, N.
1948: Radioactivity, Economic Geology in Report on Mosher Discovery of Radioactive Minerals, Pitt Township, Dist. of Cochrane; ODM, Prelim. Report 1948-7, p. 5-10.

Lang, A.H., Griffith, J.W., and Steacy, H.R.
1962: Pitt Township,;p. 276, in Canadian Deposits of Uranium and Thorium, GSC Economic Geology Series No. 16, 324p.

OGS, AFRO, Toronto - Technical File No. 63A.65, D.J. McDougall, 1948.
- SMDR File No. 0000141.

Name and Location:

Coral Rapids
Latitude 50°09'45"N Longitude 81°37'15"W
Pitt Township

References:

Bennett, G., Brown, D.D., and George, P.T.
1968: Coral Rapids-Cochrane Sheet, Cochrane District; Ontario Department of Mines, Geological Compilation Series, Map 2161. Scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto.
Technical File No.83.1-127, Licence of Occupation for Kerr Addison Mines, Limited, 1977-1979.

Tihor, L.A. and Hunt, D.S.
1979: Report of the Northern Regional Geologist and Timmins Resident Geologist; p.56-67 *in* Annual Report of the Regiuonal and Resident Geologist, 1978, edited by C.R. Kustra, Ontario Geological Survey, MP 84, 135p.

Remarks:

Kerr Addison Mines Ltd. and Hudson Bay Mining Ltd.
The Sextant Formation here is Precambrian Basement. An anomalous horizon within this formation, 20 metres thick with 0/05 to 0.1 pounds per ton U_3O_8 was intersected along the margin of a 10 kilometre wide basinal structure.
In 1978, diamond drilling revealed 0.10 pound per ton U_3O_8 over 0.20 metres in coarse arkosic beds at the southwest edge of a basin extending north northwest.

Name and Location:

M.A. Provencher
Latitude 49° 17' 21" N Longitude 81° 52' 24" W
Shackleton Township

References:

Lang, A.H.
1952: M. A. Provencher; p.277, in Canadian Deposits of Uranium and Thorium; GSC, Economic Geology Series No. 16, 173p.

Remarks:

Mineralization is found in pegmatites.

Aerobus Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uranophane

Location:

Latitude 50°21'30"N Longitude 93°21'07"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Uranium mineralization is found in medium-to-coarse-grained quartz monzonite near the contact with quartz-feldspar-biotite metasediments. Yellow staining is common.

Economic Features:

Of two drill holes, one showed 0.5% U_3O_8 (equivalent) over 5.5 feet while the other assayed 0.07% U_3O_8 (equivalent) over 4.5 feet.
Seven grab samples taken by the ODM ranged from 0.1 to 6.8% U_3O_8 (equivalent) (0.6% to 8.2% chemical).

History of Development:

1955: Trenching, geological and scintillometer surveys, and nine drill holes totalling six hundred and seventy-eight feet were completed by S. Duggan and C. St. Paul.

Principal References:

OGS, AFRO, Toronto, Aerobus Lake Area, SMDR File 000298.

OMNR, Resident Geologists File, Kenora.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P. 1967: Red Lake-Birch Lake Sheet, Kenora District, Ontario Department of Mines, Geological Compilation Sheet, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Bamaji Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Pitchblende, uraninite, and brannerite

Location:

Latitude 51°10'31"N Longitude 91°26'07"W
District of Kenora (Patricia Portion)
Map Reference: ODM Map 2247

Geology:

The Main showing is just south of a small lake, one km south of the western end of Moosetegon Lake. Radioactivity was found in a series of trenches over a strike length of 125 m. The uranium and thorium occurs in a stratigraphic unit of calc-silicate material up to 3 m wide striking approvimately 75° E, consisting of actinolite, calcite, dolomite and magnetite. A second area is located approximately 700 m west of the main occurrence. In a series of shallow trenches, narrow veinlets (2 to 4 cm) of actinolite-biotite cut porphyritic biotite trondhjemite. Grab samples collected by Sage and Breaks (1976) of the veinlet material and of the surrounding trondhjemite gave values of 0.04% U_3O_8 and 0.06% U_3O_8 respectively. (Sage and Breaks 1976, p.332). A third showing found by R. Knappett by Reconnaissance prospecting with a scintillometer, is located approximately 600 m south of the eastern end of North Bamaji Lake. It consists of a thin (less than 400 m) unit of calc-silicate material, predominantly actinolite. This unit is similar to the host rock in the main showing, 1000 m along the regional strike to the east.

At least two other small uranium-thorium occurrences lie between North Bamaji Lake and Moosetegon Lake. All may occur within the same units or units in close proximity. Further evidence suggests that the uranium-bearing units may be of considerable lateral extent.

Economic Features:

The highest values obtained by Urangesellschaft Canada, Limited were 0.060 - 0.290% U_3O_8.

History of Development:

1954: Trenching, stripping and 11 diamond drill holes were completed by McCombe Mining and Exploration, Ltd.

1968: An airborne spectrometer survey was carried out by the Kirkland Townsite Gold Mines, Limited.

1975: Magnetometer and electromagnetic survey of the Bamaji Lake Group was completed by Dome Exploration (Canada), Limited.

1979: Exploration activities were carried out by Urangesellschaft (Canada), Limited.

Principal References:

OGS, AFRO, Toronto - Technical File No. 63.2510, Kirkland Townsite Gold Mines, Limited, Fry Lake Area, 1968.
- Technical File No. 2.3258, Urangesellschaft (Canada), Limited, Fry Lake Area, 1979.
- Technical File No. 2.1705, Dome Exploration (Canada), Limited, Fry Lake Area, 1975.
- Fry Lake Area, Drill Log Report No. 10, McCombe Mining and Explorations, Limited, 1954.
- SMDR File 000302, Kirkland Townsite.

Bond, W.D., and Breaks, F.W.
1978: Ground Evaluation of Airborne Radiometric Anomalies in Northwestern Ontario; p.22-27 in Summary of Fieldwork, 1978, by the Ontario Geological Survey, edited by V.G. Milne, O.L. White, R.B. Barlow, and J.A. Robertson, OGS, MP 82, 235p.

Sage, R.P., and Breaks, F.W.
1976: Operation Pickle Lake, Districts of Kenora (Patricia Portion) and Thunder Bay; Ontario Division of Mines, OFR 5180, 531p.

Bear Head Lake Prospect

Commodity:

Uranium

Radioactive Minerals:

Uranophane, uranothorite, and zircon.

Location:

Latitude 52° 46' 42" N Longitude 93° 44' 56" W
District of Kenora Patricia Portion
Map Reference: ODM Map 2262

Geology:

Uranium mineralization occurs in pegmatite-bearing zones between biotite-granite gneiss to the south and a migmatite-granite gneiss-pegmatite complex to the north. The strike of the contact is N 65-70° W. All of the rocks present are of Early Precambrian age.

There are 17 main showings. Their locations will be noted at the end of this description. Their description is described as follows;

1) The East Showing is approximately 500 feet long, 20-100 feet wide, trending N65° W, dipping 60-90° S, and assays 0.01% - 0.10% U_3O_8 (RE). (1 h)
2) The Camp Showing is a continuation of the East Showing. It strikes N 67 - 73° W, dips steeply south, is 250 feet long, 25 - 30 feet wide, and assays from 0.005 - 0.018% U_3O_8 (RE). (1 a)
3) The Bear Creek Showing strikes N 68 - 70° W assaying 0.009 - 0.209% U_3O_8 (RE). It is 200 feet long and 25 - 30 feet wide.(1 b)
4) The Father Showing strikes N 70 - 87° W, dips 70 - 90° S, is 600 feet long, 75 - 150 feet wide and assays show 0.131% U_3O_8 (RE).(1 c)
5) The Crag Showing is approximately 1,500 feet long. (1 d)
6) The dimensions of the Mother Showing are unknown.(1 q)

Assays from the remaining zones are as follows;

7) A 0.045% U_3O_8 . Corresponding numbers on the map are; 1F, , 1D, 1C, and 1G.
8) B 0.09% U_3O_8
9) C 0.070% U_3O_8
10) D 0.025% U_3O_8 . Corresponding numbers on the map are; 1E.
11) E 0.20% U_3O_8
12) F 0.03% U_3O_8
13) West Showing 0.03% U_3O_8
14) H Zone corresponds to the following numbers on the map; 1J, 1K, 1I.
15) I Zone corresponds to the following numbers on the map; 1L.
16) K Zone corresponds to the following numbers on the map; 1M, 1N, 1O.
17) M Zone corresponds to the following numbers on the map; 1P.

Economic Features:

In 1977 Kerr Addison Mines Limited and Dolores Bench Resources drilled 29,871 feet in 66 holes. the indicated reserves are 978,810 tons of ore averaging 0.06% U_3O_8 to a depth of approximately 500 feet.

History of Development:

1929: ODM Survey conducted by M.E. Hurst in the Annual Report Vul. 38 part 2.

1955: Surface mapping, aerial and ground radiometric survey, trenching and 7 diamond drill holes were completed for a total of 1,423 feet on claims KRL546636, KRL154640, and KRL60453 by Cam Mines Limited.

Favourable Mines drilled 3 diamond drill holes for a total of 1,250 feet on claims KRL5987-KRL6009.

1969: Stripping, trenching, blasting, scintillometer surveys, and 8 diamond drill holes totalling 7,084 were completed by the Keevil Mining Group.

1971: Twenty-six trenches were dug on Zones A,B,C,D,E,F, and West.

1977: A total of 29,871 feet of drilling was completed by Kerr Addison and Dolores Bench Resources.

Principal References:

Ayres, L.D., Randsepp, M., Averill, S.A., and Edwards, G.R. 1972: Favourable Lake-Poplar Hill Area; Indian Village-Moose Mountain Sheet, District of Kenora (Patricia Portion); Ontario Dept. of Mines, Prelim. Map P. 769, Geol. Comp. Ser., scale 1 inch to 2 miles. Geological Compilation 1968-1972.

OGS, AFRO, Toronto
- Technical File No. 63.797, Sigasco Explorations Limited, 1957.
- Technical File No. 63.2278, Cam Mines Limited, 1969.
- Setting Net Lake Area, Drill Log Report Nos. 10-17, 1956-1959.
- SMDR File No. 00304.

Locations of the Occurrences:

1A	93° 44' 30" W 52° 46 30 N	1K	52° 39' 20" W 93° 36 00 N
1B	93° 45' 00" W 52° 46 45 N	1L	52° 41' 00" W 93° 34 00 N
1C	93° 47' 25 " W 52° 47 25 N	1M	52° 39' 00" W 93° 29 00 N
1D	93° 49' 50" W 52° 48 00 N	1N	52° 40' 00" W 93° 28 00 N
1E	93° 43' 35" W 52° 45 45 N	10	52° 39' 00" W 93° 26 00 N
1F	93° 42' 00" W 52° 45 15 N	1P	52° 40' 00" W 93° 23 10 N
1G	93° 48' 35" W 52° 47 35 N	1Q	93° 51' 20" W 52° 48 40 N
1H	52° 43' 50" W 93° 38 00 N	1	93° 44' 00" W 52° 46 25 N
1I	52° 41' 30" W 93° 38 00 N	1S	93° 39' 00" W 52° 44 00 N
1J	52 39 40 93 38 30	1R	93° 20' 00" W 52° 37 30 N
		1T	93° 32' 10" W 52° 12 30 N

Cameron, M. - Alcock, C. Occurrence

Commodity:

Uranium, thorium

Radioactive Minerals:

Monazite, uraninite

Location:

Latitude 50°00'00"N Longitude 94°31'32"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Radioactive mineralization occurs in pegmatite dikes that intrudes lava remnants that are altered by granite and pegmatites along a schistosity. The dike strikes N 15° W exposed over a length of 30 feet and has a width of nine feet.

Economic Features:

Counts of up to eight times the background were obtained in a pit on the dike. Grab samples assayed 0.17% (radiometric equivalent) and 0.14% (chemical equivalent). Chip samples were taken by Minorex Limited in existing trenches. Their assays averaged 0.22 pounds per ton U_3O_8.

History of Development:

1952: Pits were dug by M. Cameron and C. Alcock.

1967: An airborne radiometric survey was completed by Headvue Mines, Limited.

1979: Radiometric, magnetometric and geological mapping was undertaken by Minorex, Limited.

Principal References:

Chisholm, E.O.
1951: Location No. 6; p.2-3, in Preliminary Report on Radioactive Occurrences in the Kenora Area, ODM Preliminary Report 1950-1.

OGS, AFRO, Toronto - SMDR File 000297
- Technical File No. 2.3136, Minorex Limited, 1979.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Can-Fer Mines Occurrence
(Oneman Lake)

Commodity:

Uranium

Radioactive Minerals:

Uranophane

Location:

Latitude 50°21'07"N Longitude 94°41'52"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Uranium mineralization is associated with light grey and pink granitic pegmatite dikes trending in an east-west direction. The highest radioactivity occurs along minor biotite slips and shears.

Economic Features:

In 1968 two showings 15 and 5 feet wide averaged 0.065% and 0.38% U_3O_8 respectively.

In 1975 6 trenches along a strike zone of high radiation 20 to 40 feet wide averaged 0.002% to 0.006% U_3O_8.

History of Development:

1968: Trenching, scintillometer survey and assaying was carried out by Steve Lesavage.

1975: Trenching and assaying was undertaken by ODM staff.

1970: A geological survey was carried out by ODM staff.

Principal References:

OMNR, Resident Geologist's Files, Kenora.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Davidson Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50° 29' 26" N Longitude 95° 08' 50" W
District of Kenora
Map Reference: ODM Map 2175

Geology:

This area is underlain by medium-grained, grey granitic rocks with occaisional sections and remnants of well-bedded grey, quartz-biotite metasediments. Radioactivity is confined to coarse-grained pink pegmatite phases with coarse biotite within the granites.

Economic Features:

Trenching and sampling was undertaken in four areas over a length of 3,000 feet. The first area on the north shore of the lake exhibited 0.375% U_3O_8. The third trench gave readings of o.535% U_3O_8 (RE).

History of Development:

1955-1956: Airborne radiometric, magnetometer, scintillometer, and ground electromagnetic surveys, and diamond drilling was carried out by Anglo Barrington Mines Limited.

1970: Geophsyical and geological reports were completed by Consolidated Manitoba Mines Limited.

Principal References:

Ferguson, S.A., Brown, D.D., Davies, J.C., and Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM Geological Compilation Series Map 2175, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Technical File No. 63.751, Anglo Barrington Mines Limited, 1955-1956.
- SMDR File No. 000196.

OMNR, Resident Geologist, Kenora Files, Davidson Lake.

L. B. Halliday Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50°36'32"N Longitude 95°04'04"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

This area is underlain by biotite gneiss cut by narrow dikes of granite and grandiorite. Moderate radioactivity was found associated with the granite dikes.

History of Development:

1969: Six diamond drill holes totalling 305 feet drilled by L. B. Halladay.

1979: A radiometric survey was undertaken by W. G. Wahl, Limited.

Economic Features:

Chemical analyses returned readings of 0.01% U_3O_8 and 0.01% Th_2O. Radiometric equivalent values averaged 0.02% U_3O_8 in dikes 0.06 to 4.9 m wide.

Principal References:

OGS, AFRO, Toronto - SMDR File 001129.
- Snowshoe Lake Area, Drill Log Report No. 10, 1969.
- Technical File No. 2.2943, W. G. Wahl, Limited, 1979.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Headvue Mines, Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite and monazite

Location:

Latitude 50°01'19"N Longitude 94°32'13"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Uranium mineralization is associated with pegmatite intruding strongly foliated Archean aged gneiss.

History of Development:

1967: Aeroradiometric and ground magnetometer surveys as well as trenching and sampling was completed by Headvue Mines, Limited.

1979: Radiometric and magnetometer surveys, geological mapping and sampling were carried out by Minorex, Limited.

Economic Features:

Unknown

Principal References:

OGS, AFRO, Toronto - SMDR File 001077.
- Technical File No. 2.3136, Minorex, Limited, 1979.

OMNR, Resident Geologist's Files, Kenora.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

M. Jenson Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite and thorite

Location:

Latitude 49° 50' 57" N Longitude 93° 25' 54" W
Langton Township
Map Reference: ODM Map 2443

Geology:

Uranium mineralization occurs in two lenses of gneissic pegmatite granite. They were found to be 3 to 5 feet wide by 50 feet and intruded Kewatin lavas that contain much magnetite.

Economic Features:

A radioactive survey shows counts up to 18 times the background. A bulk sample assayed by the Mines Branch had an average content of 0.054% U_3O_8(RE). The average of the grab samples from two channels was 0.016% U_3O_8 (RE).

History of Development:

1955: Four diamond drill holes were drilled totalling 806 feet by A.O. Lantz on claims K17455 and K17460.

Principal References:

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: M. Jenson Occurrence; p. 57, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

OGS, AFRO, Toronto - Langton Township, Drill Log Report No. 12, M. Jenson, 1955.

Pancer Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50°19'16"N Longitude 94°35'09"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Uranium mineralization occurs in five pegmatite dikes, trending east-west cutting granite. Radioactivity is erratic with the highest near biotite concentrations.

There are three main showings. Their dimensions are as follows: 400 feet by 60 to 150 feet, 200 feet by 30 feet, and 12 feet by 6 feet.

Economic Features:

Two samples averaged 0.13% U_3O_8 (chemical). Grab samples gathered by the ODM averaged 0.004% U_3O_8.

History of Development:

1955: Geological and scintillometer surveys were completed by S. Ciglen.

1970: Ten diamond drill holes were drilled totalling 3,010 feet by P. Davidson.

1979: A magnetic survey was completed over this area.

Principal References:

OGS, AFRO, Toronto - Technical File No. 63.633, Paterson Lake Area, 1955.
- Paterson Lake Area. Drill Log Report No. 12, 1970.
- SMDR File 000299.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P. 1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Perch Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50°04'57"N Longitude 94°33'04"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

The geology is characterized by folded metasediments and metavolcanics intruded by later Precambrian granites, quartz monzonites and pegmatites. Biotite-rich pegmatites have the strongest radioactivity.

A 30-foot long trench exposed coarse-grained pegmatite with local concentrations of biotite.

Economic Features:

Grab samples collected gave assays of 0.086% U_3O_8 and 0.03% ThO_2. Grab samples from surface test pits made by the Mineral Research Branch ranged from 0.44 to 1.72 pounds per ton.

History of Development:

1950: Trenching by C. Alcock.

1969: Airborne radiometric work was completed by Coleman - Morton.

1976 - 1977: This property was optioned to Anschutz Oil Company. In conjunction with the owner D. Loudon, ground radiometric and geological surveys were completed.

Principal References:

OGS, AFRO, Toronto - SMDR File 001125
- Technical File No. 2.2405, Anschutz Uranium Corporation, 1977.
- 1977 Report Regional and Resident Geologists.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P. 1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

J.D. Pirson Occurrence
(Medicine Stone Lake)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50°54'38"N Longitude 94°10'09"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

The radioactivity is associated with a mass of sheared hornblende granite containing many greenstone inclusions. Thorium accounts for a large portion of the radioactivity.

Economic Features:

The greatest radioactivity occurred in areas approximately two to eight feet in width, underlain by shear zones in greenstone inclusions. Grab samples which have been assayed show 0.047 to 0.079% U_3O_8

History of Development:

Unknown

Principal References:

Ferguson, S.A., Brown, D.D., Davies, J.C., and Pryslak, A.P.
1976: Red Lake-Birch Lake Sheet, Kenora District; ODM Geological Compilation Series Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: J.D. Pirson;p. 62, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

Pine Road Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 49°46'41"N Longitude 93°49'01"W
District of Kenora
Map Reference: ODM Map 2443

Geology:

These rocks are contained within the Feist Lake Group. Radioactivity is confined to the pegmatitic bodies found in contact with the gneisses and migmatites. The strike lengths of the anomalies are apparently controlled by the strike lengths of the lenses of supracrustal rock with which they are spatially associated.

Economic Features:

Unknown

History of Development:

Unknown

Principal References:

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Technical File 2.2768, Sherritt Gordon Mines Limited, 1978.
- MDIR File K 0344.

Scrhryburt Lake Area Occurrence

Commodity:

Uranium and niobium.

Radioactive Minerals:

Unknown

Location:

Latitude 52° 36' 00" N Longitude 89° 36' 10" W
District of Kenora (Patricia Portion)
Map References: ODM Map P. 2236

Geology:

This occurrence is situated within the Schryburt Lake carbonatite complex. It is composed of calcitic carbonatite. There are bands of nearly pure actinolite, apatite, magnetite, biotite, or pyrholite alternate with pink to pinkish-white carbonatite. The texture is equigranular to medium-grained.

Economic Features:

E. I. Dupont and De Nemours Company Limited, 1961 and the Many Lakes Exploration Company Limited completed 28 pits and trenches. The uranium and niobium values are from a uranium-bearing pyrochlore. A sample of weathered carbonatite assayed 0.039% U_3O_8 and 0.08% NbO_2 (Mineral Resources Branch, Ministry of Natural Resources)

Principal References:

Sage, R.P. and Wright, W.
1979: Schryburt Lake Carbonatite Complex, District of Kenora(Patricia Portion): Ontario Geological Survey Prelim. Map P. 2236, Geol. Surv., scale 1:15 840 or 1 inch to ¼ mile. Geology 1976.

Snook Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uranophane

Location:

Latitude 50°12'36"N Longitude 94°40'05"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Uranium mineralization is associated with homogeneous coarse-grained pink quartz monzonite having a vague but distinctive porphyritic appearance. There are occasional coarse spots of magnetite.

Economic Features:

ODM chip samples across a trenched zone assayed 0.16% U_3O_8 over 65 feet.

History of Development:

1976: Trenching and one diamond drill hole was drilled by J. Harrison.

1977: Trenching was carried out by J. Harrison.

Principal References:

Beard, R.C., and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and Kenora Resident Geologist; p.1-13, in Annual Report of the Regional and Resident Geologists 1977, edited by C.R. Kustra, OGS, MP 78, 121p.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

OMNR, Resident Geologist's Files, Kenora.

Tourist Lake Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50°16'04"N Longitude 94°40'08"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Uranium mineralization is associated with the narrow and highly sheared portions of two narrow northeasterly-trending bands of biotite schist and gneiss.

Economic Features:

Assays from 1969 average 1.25 pounds per ton U_3O_8 over an average width of 7.5 feet.

Assays from 1976, Huronian Mines, shows values of 0.9 pounds over 9 feet. In three holes completed in one 23-foot section, assay values averaged 0.56 pounds per ton U_3O_8.

History of Development:

1968 - 1970:	Airborne radiometric survey, geological, ground magnetometer, scintillometer surveys, 31 trenches totalling 721 feet, and three Winkie drill holes totalling 113 feet were all performed by Bralorne Can-Fer Resources, Limited.
1975:	Sampling of the westerly trenches was done by the Hanna Mining Company and Denison Mines, Limited.
1976:	Nine drill holes totalling 1,635 feet were drilled by Consolidated Summit Mines, Limited.

Principal References:

Ferguson, S.A., Brown, D.D., Davies, J.C., and Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Prospectus, Consolidated Summit Mines Limited, 1976.

The Northern Miner, Vol. 62, No. 22 and 39, 1976.

OGS, AFRO, Toronto - Paterson Lake Area, Drill Log Report Nos. 13 and 14, 1976.
- Technical File No. 2.307, 1971.
- SMDR File No. 001126.

Treelined Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50°08'04"N Longitude 94°40'00"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Sediments in this location are generally siliceous containing sulphides and are highly metamorphosed and locally recrystallized. Interspersed are zones of biotite-rich granitic rocks. Pegmatites are also present.

The highest radioactivity is associated with biotite-rich granitic rocks.

Economic Features:

Grab samples taken assayed 0.008 to 0.02% U_3O_8 and 0.28% ThO_2.

History of Development:

1968: Linklatter dug trenches and pits.

1976: This area was restaked by Harrison and Perkins.

1976: Sampling was carried out by T. Skiming.

Principal References:

OMNR, Resident Geologist's Files, Kenora.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P. 1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Vermilion Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50°01'37"N Longitude 94°30'00"W
District of Kenora
Map Reference: ODM Map 2175

Geology:

The geology is similar to that of the Cameron - Alcock Occurrence which is characterized by radioactive particles in a pegmatite dike which has intruded into lava remnants.

Economic Features:

Unknown

History of Development:

1967: Airborne radiometric survey was completed by Headvue Mines, Limited.

Principle References:

Robertson, J.A.
1968: Vermilion Lake Occurrence; p.6, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63.2344, Headvue Mines, Limited, 1967.
- SMDR File 000296.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Wolf Island Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 49° 39' 40" N Longitude 94° 32' 36" W
District of Kenora
Map Reference: OGS Map 2443

Geology:

Mineralization is associated with a six- inch, bluff coloured quartz-carbonate hydrothermal vein exposed in pillowed, basaltic lava for 20 feet. The vein material consists of fine-grained quartz and carbonate and is sparsely mineralized eith fine pyrite and chalcopyrite.

History of Development:

1950: Samples were taken by E. O. Chisholm.

Economic Features:

A grab sample taken by E. O. Chisholm assayed 0.10% U_3O_8 (RE) and a trace of gold.

Principal References:

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Mineral Development Sector, Department of Energy, Mines and Resources, National Mineral Inventory File U1, 52/E/10, Wolf Island Sept. 1963.

Robertson, J.A.
1968: Wolf Island Occurrence; p.62, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

Coulee Lead and Zinc Mines, Limited Occurrence
(Kimber Lake - West)

Commodity:

Uranium

Radioactive Minerals:

Uraninite, beta-uranotil, and uranophane

Location:

Latitude 49°50'33"N Longitude 93°37'12"W
Bridges Township
Map Reference: ODM Map 2303

Geology:

The property is underlain by metasediments of Early Precambrian age which are intruded by felsic granitic rocks. These intrusions vary in composition from medium-to-coarse-grained grandiorite to pink pegmatite.

Uranium mineralization is associated with pegmatite. Secondary minerals are concentrated along the discontinuous and randomly oriented fractures near the surface.

Economic Features:

Samples taken from the trenches and pits by Coulee Lead and Zinc Mines, Limited showed assays running from 0.02 to 0.42% U_3O_8. The highest radiometric values obtained from a drill core by Noranda Mines, Limited was 0.08% U_3O_8 over 5 feet. Most values were less than 0.02% U_3O_8.

History of Development:

1955: Trenching, two drill holes totalling 90 feet was completed by F. Mallery.

1967: An airborne radiometric survey followed by ground radiometric and magnetometer surveys, trenching and pitting was completed by Coulee Lead and Zinc Mines, Limited.

1968: Optioned by Noranda Mines, Limited that completed a geological survey, blasted numerous trenches and drilled four diamond drill holes totalling 1,384 feet.

1974: A geological report was completed by Imperial Oil Limited.

1977: Anschutz Uranium Mines Limited completed a geological evaluation.

Principal References:

Pryslak, A.P.
1976: Coulee Lead and Zinc Mines Limited; p. 37-38, in Geology of the Bruin Lake-Edison Lake Area, District of Kenora, ODM, Geoscience Report 130, 61 p. Accompanied by Maps 2302 and 2303, scale 1;31,680 or 1 ich to 4 miles.

OGS, AFRO, Toronto
- Bridges Township, Drill Log Report No. 17, 1968.
- Technical File No. 63.2267, Coulee Lead and Zinc Mines Limited, 1968.
- Technical File No. 2.1665, Imperial Oil Limited, 1974.
- Technical File 2.2451, Anschutz Uranium Mines Limited, 1977.
- SMDR File No. 000281.

R. Fairservice Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite, uranophane, and allanite.

Location:

Latitude 49° 50' 00" N Longitude 93° 41' 22" W
Bridges Township
Map Reference: ODM Map 2303

Geology:

Radioactivity noted was associated with the pegmatitic phases of the granitic rocks of Early Precambrian age. One of several radioactive pegmatite dikes in the area can be traced over a length of approximately 1,550 feet, and is well exposed along the rock cut for the natural gas pipeline. This dike is approximately 25 feet wide at this point and contains abundant secondary uranium minerals along fracture planes.

Economic Features:

Grab samples collected by ODM staff assayed 0.051% and 0.025% U_3O_8.

Samples taken by Sherritt Gordon Mines Limited assayed 1.52 to 2.8 pounds U_3O_8 per ton. Molybdenum is also present here.

History of Development:

1967-1968: Three pits were dug by Noranda Mines Limited.

1976: Two drill holes totalling 243 feet were drilled by Sherritt Gordon Mines Limited. This company also completed scintillometer and magnetometer surveys.

1977: Robert Fairservice drilled and sampled. Geological mapping was undertaken by D. Pike.

Principal References:

Beard, R.C. and Scott, W.R.
1976: 1975 Report of the Kenora Resident Geologist; p. 1-17, in Annual Report of the Regional and Resident Geologists, 1975, edited by C.R. Kustra, Ontario Division of Mines, MP 64, 146 p.

Pryslak, A.P.
1976: Noranda Mines Limited; p. 6, in Geology of the Bruin Lake-Edison Lake Area, ODM Geoscience Report 130, 61 p. Accompanied by Maps 2302 and 2303, scale 1 inch to ½ mile or 1:31,680.

OGS, AFRO, Toronto - Technical File No. 2.2506, R. Fairservice, 1977.
- Bridges Township, Drill Log Report No. 20, Sherritt Gordon Mines Limited, 1976.
- SMDR File No. 001122.

Headway Red Lake Gold Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite

Location:

Latitude 49° 50' 37" N Longitude 93° 40' 28" W
Bridges Township
Map Reference: ODM Map 2303

Geology:

The highest radioactivity occurs in association with the biotite-rich zones within pegmatites.

Economic Features:

Two grab samples from two showings assayed 4.2 pounds uranium per ton.

History of Development:

1967: Grab samples were taken by Headway Red Lake Gold Mines Limited.
An aeroradiometric survey was completed by Coulee Lead and Zinc Mines Limited.

1969: One diamond drill hole was dug by Noranda Exploration Company.

1974: Imperial Oil Limited completed a geological survey in the area.

Principal References:

Pryslak, A.P.
1976: Geology of the Bruin Lake-Edison Lake Area, District of Kenora, ODM, Geoscience Report 130, 61 p. Accompanied by Maps 2302 and 2303, scale 1:31,680 or 1 inch to ½ mile.

Robertson, J.A.
1968: Headway Red Lake Gold Mines Limited; p. 56, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No. 9 106 p.

OGS, AFRO, Toronto - SMDR File No. 000282.

Kimber Lake (East) Occurrence
(C. S. Stephens)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 49°50'36"N Longitude 93°34'15"W
Docker Township
Map Reference: ODM Map 2303

Geology:

An easterly-trending radioactive pegmatite dike occurs along the north shore of Kimber Lake, near the east end of the lake. The dike ranges from 100 to 250 feet in width and can be followed for 4,000 feet. The highest radioactivity is associated with biotite-rich and apatite-rich phases of the pegmatite.

Economic Features:

Chip samples were taken across ten-foot fections from a trench and were found to contain an average of 0.024% U_3O_8.

History of Development:

1968: Pitting and trenching by C.S. Stephens.

1974: A geological survey was completed by Imperial Oil, Limited.

Principal References:

Pryslak, A.P.
1976: C.S. Stephens; p.50, in Geology of the Bruin Lake-Edison Lake Area, District of Kenora, Ontario Division of Mines, Geoscience Report 130, 61p. Accompanied by Maps 2302 and 2303, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Technical File 2.1665, Imperial Oil, Limited, 1974.
- SMDR File 001124.

Bluett Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Allanite and uranophane

Location:

Latitude 49°58'01"N Longitude 92°38'09"W
Drope and Breithaupt Townships
Map Reference: OGS Map 2443

Geology:

Uranium mineralization is contained in a sill of pegmatite 35 feet wide, bounded by quartz-biotite metasediments, and striking 45 degrees.

Economic Features:

Thirteen grab samples taken from a three-foot exposure assayed from 0.25 to 5.4% U_3O_8. Molybdenite is also present.

History of Development:

1968: Prospecting, trenching and sampling by Conwest Exploration Company, Limited.

Principal References:

OMNR, Resident Geologist's Files, Sioux Lookout.

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Loudon Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude $49^{\circ}51'46''$N Longitude $93^{\circ}21'39''$W
Langton Township
Map Reference: ODM Map 2443

Geology:

Radioactive showings occur in an area underlain by granite containing quartz monzonite and amphibolite.

Economic Features:

In 1974 R.C. Beard of the ODM carried out scintillometer surveys in the area. Radioactive readings were 8,000 CPM over a background of 1,000 CPM.

In 1975 Kerr Addison Mines, Limited assayed some drill samples. The average value was 0.25% U_3O_8 over 30 to 40 feet.

Principal References:

OMNR, Resident Geologist's Files, Tew and Loudon Prospect, Kenora.

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Preston East Dome Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Laitude 49° 51' 09" N Longitude 93° 25' 45" W
Langton Township
Map Reference: ODM Map 2443

Geology:

The mineralized zone consists of radioactive pegmatite cutting biotite gneiss and granite.

Economic Features:

Drilling by Preston East Dome Mines Limited in 1955, cut 25 feet of radioacitve pegmatite that averaged 0.28% U_3O_8.

History of Development:

1954-1955: One diamond drill hole was drilled by J. McLeod on claim K17346.

1955: Twenty-eight drill holes totalling 2,132 feet and 5 trenches were drilled and blasted by Preston East Dome Mines Limited on claim K17437.

Principal References:

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Northern Miner , Vol. 62, No. 28, Sept. 23, 1976, p. C.18.

OGS, AFRO, Toronto - Langton Township, Drill Log Report No. 14.
- SMDR File No. 000285.

Foot Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 49°49'12"N Longitude 93°59'50"W
MacNicol Township
Map Reference: ODM Map 2302

Geology:

Radioactive mineralization is found in sections in granite within mafic volcanics.

Economic Features:

One ten-foot section assayed 0.07% U_3O_8.

History of Development:

1955: One diamond drill hole was drilled by Kerr Addison Mines, Limited.

Principal References:

OMNR, Resident Geologist's Files, Kenora.

Pryslak, A.P.
1974: MacNicol and Tustin Townships, Kenora District; Ontario Division of Mines, Geological Map 2302, scale 1:31,680 or 1 inch to 1/2 mile.

Hawk Lake Occurrence
(Byberg, Campbell-MacFarlane)

Commodity:

Uranium

Radioactive Minerals:

Uraninite, euxenite, thorite, uranophane, and beta-uranotil

Location:

Latitude 49°48'47"N Longitude 94°00'16"W
MacNicol Township
Map Reference: ODM Map 2302

Geology:

This area is underlain by mafic to intermediate volcanic rocks (hornblende and schist) which are intruded by numerous irregular dikes and masses of pegmatites.

Uranium mineralization is associated with masses and stringers of coarse magnetite within the pegmatite.

Economic Features:

Twenty-three grab samples from the vicinity of the main showing averages less than 0.05% U_3O_8.

Grab samples taken by Kerr Addison Mines, Limited in 1975 assayed 0.41 to 1.9 pounds per ton U_3O_8.

History of Development:

Up to 1954:	The main showing contained on claim K16596, had been explored by stripping and trenching one open cut over a length of 130 feet and a geiger counter survey.
1954:	Trenching was done by the Great Lakes Uranium Corporation.
1975:	Kerr Addison Mines, Limited performed diamond drilling.
1977:	Canmet indicated a new mineral resembling allanite. It assayed 67% U_3O_8, 21% PbO_2, 8.5% Th_2O and 0.5% cerium.

Principal References:

Beard, R.C. and Scott, W.R.
1976: 1975 Report of the Kenora Resident Geologist; p. 1-17 in Annual Report of the Regional and Resident Geologists, 1975, edited by C.R. Kustra, Ontario Division of Mines, MP 64, 146 p.

Pryslak, A.P.
1974: MacNicol and Tustin Townships, Kenora Disrict; Ontario Division of Mines, Geological Map 2302, scale 1:31,680 or 1 inch to ½ mile.

Robertson, J.A.
1968: Byberg Proerty; p. 57-58, in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No. 9 , 106 p.

1981: The Uranium Deposits of Ontario - Their Distribution and Classification; OGS, MP 86, 37p.

Satterly, j.
1955: Hawk Lake Showing; p. 1-5, in Radioactive Occurrence in the Vicinity of Hawk and Richard Lakes , ODM, Geological Circular No. 1.

OGS, AFRO, Toronto - SMDR File No. 000288.

Kenoratomic Mines, Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite, monazite, allanite, kasolite, uranophane, and beta-uranolite

Location:

Latitude 49°50'36"N Longitude 93°55'23"W
MacNicol Township
Map Reference: ODM Map 2302

Geology:

The area is underlain by foliated to gneissic metavolcanics, mafic to intermediate in composition, intruded by widespread dikes and irregular bodies of pegmatite.

Uranium mineralization is associated with pegmatite, magnetite, biotite, and occasional molybdenum. This property is the eastern extension of the New Campbell Island Mines, Limited.

Economic Features:

Assays from this ore zone was 0.098% over 3.5 feet. Another sample taken at the north end of Richard Lake assayed 0.087% U_3O_8 across 2.5 feet and 0.064% U_3O_8 across 5 feet. (Pryslak, A.P., GR Report 130, 1976).

History of Development:

1955: Trenching, two diamond drill holes totalling 394 feet were drilled by Burning Rock Uranium.

Trenching, four diamond drill holes totalling 1,082 feet were completed by Acko Mines, Limited at the west end of the property.

1956 - 1957: Geological, scintillometer and magnetometer surveys, and 12 diamond drill holes totalling 2,500 feet were completed by Kenoratomic Mines, Limited.

1978: Geological and geophysical surveys were completed on the Richard Lake property by Golden Standard Mines, Limited.

Principal References:

Pryslak, A.P.
1976: Kenoratomic Mines Limited; p. 45-46, in Geology of the Bruin Lake-Edison Lake Area, District of Kenora, ODM, Geoscience Report 130, 61p. Accompanied by Maps 2302 and 2303, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Technical File No. 63.916, Kenoratomic Mines Limited, 1957.
- MacNicol Township , Drill Log Report No.17.
- Technical File No. 2.2905, Golden Standard Mines Limited, 1978.
- SMDR File no. 000287.

Richard Lake Prospect
(New Campbell Island)

Commodity:

Uranium

Radioactive Minerals:

Uraninite, uranothorite, allanite, and beta-uranotil

Location:

Latitude 49°50'52"N Longitude 93°55'00"W
MacNicol Township
Map Reference: ODM Map 2302

Geology:

Uranium mineralization is associated with a series of parallel magnetite-bearing pegmatite dikes cutting highly recrystallized, foliated to gneissic, Early Precambrian metavolcanics.

This prospect consists of four zones. The two southern-most contain dikes of low grade material five to seven feet in width. The two central zones are the widest. The dikes here range from 10 to 20 feet in width and extend for at least 700 feet.

Radioactivity is sometimes associated with magnetite-rich sections within the pegmatites.

Economic Features:

A.S. Bayne and Company estimated ore reserves at 650,000 tons grading 0.10% U_3O_8 based on an explored length of 700 feet, a depth of 1,000 feet and an average width of 10 feet.

Grab samples from 10 trenches gave an average assay of 0.15% U_3O_8.

History of Development:

1954 - 1956: Stripping, geiger counter survey, 13 trenches and 17 diamond drill holes totalling 5,000 feet.

No. 1 Adit with 220 feet of drilling and 350 feet of crosscutting. The two adits were joined by a 60-foot raise.

Some horizontal diamond drill holes totalling 250 feet were drilled underground.

All the work was completed by Campbell Island Mines and Exploration, Limited.

1976: Rollmac remapped the UG workings and carried out ground magnetic and scintillometer surveys.

1977: Golden Standard Mines Limited drilled 10 diamond drill holes to 2,000 feet doubling the strike loength of the zone. Magnetometer and radiometric surveys were also carried out.

1978: International Standard Resources Limited formerly Golden Standard Mines Limited performed geological and geophysical surveys.

Prinicpal References:

Beard, R.C.
1977: Kenora Uranium Deposits, Proceedings of the 33rd Annual Meeting of Lake Superior Geology, 1977.

Pryslak, A.P.
1976: New Campbell Island Mines Limited (6); p. 45-46, in Geology of the Bruin Lake-Edison Lake Area, ODM, Geoscience Report 130, 61 p. Accompanied by Maps 2302 and 2303, scale 1:253,440 or 1 inch to ½ mile.

Robertson, J.A.
1968: New Campbell Island Mines Limited; p. 58, in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9 106 p.

OGS, AFRO, Toronto - Technical File No. 2.2480, Rollmac Exploration Limited, 1977.
- Technical File no. 2.2905, Rollmac Exploration Limited, 1978.
- SMDR File No. 000289.

Bottle Bay Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uranophane

Location:

Latitude 49° 47' 11" n Longitude 93° 16' 05" W
Temple Township
Map Reference: OGS Map 2443

Geology:

This proerty is underlain by metasediments (arkose) and hornblende granite intruded by masses and dikes of coarse-grained granite pegmatite.
Radioactivity is associated with apatite in the granite pegmatite where uraniferous staining is reported.

Economic Features:

Radiometric surveying indicates values up to 1.0 pound U_3O_8 per ton. ODM assays recorded 0.005 and 0.083% U_3O_8.

History of Development:

1975-1976: Trenching, radiometric surveys and one diamond drill hole was completed by F.O.B. Mining and Exploration Limited.

1977: F.O.B. Mining and Exploration Limited completed a geological report.

Principal References:

Beard, R.C. and Scott, W.R.
1976: 1975 Annual Report of the Kenora Resident Geologist; p. 1-17, *in* Annual Report of the Regional and Resident Geologists, 1975, edited by C.R. Kustra, Ontario Division of Mines, MP 64, 146p.

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Temple Township, Drill Log Report, F.O.B. Mining and Exploration Company Limited, 1976.
- Technical File No. 2.2261, F.O.B. Mining and Exploration Limited, 1976.
- Technical File No. 2.2668, F.O.B. Mining and Exploration Company Limited,1977.
- SMDR File No. 000669.

Ascot Metals Corporation Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite and uranophane.

Location:

Latitude 49° 50' 37" N Longitude 93° 52' 12" W
Tustin Township
Map Reference: ODM Map 2302

Geology:

Uranium mineralization is associated with pegmatite that intrudes a belt of Keewatin biotite paragneiss. The pegmatite is one mile in width and crossing the claim group at a strike of N 80° E and dip of 70° N.

Economic Features:

Three radioactive zones have been found.
Zones A,B, and C are associated with pegmatite dikes.
An Ontario Department of Mines grab sample from Zone A assayed 0.2 % U_3O_8 .

History of Development:

1955-1956: Geological, magnetic and radiation surveys were carried out by the Ascot Metals Corporation Limited.
One diamond drill hole reached 51 feet.
Eight trenches and some stripping in Zone A, extensive stripping in Zone B and some blasting and stripping in Zone C was completed.
Some surface work was completed by Burning Rock Uranium Mines Limited.

1956-1957: Unspecified work was carried out by Kenoratomic Mines Limited.

Principal References:

OGS, AFRO, Toronto - Technical File No. 63.601, Ascot Metal Corporation, Hawk Lake Area, 1955.
- SMDR File No. 000286.

Pryslak, A.P.
1976: Ascot Metals Corporation Limited; p. 49, in Geology of the Bruin Lake-Edison Lake Area, District of Kenora, ODM Geoscience Report 130, 61p. Accompanied by Map 2302 and 2303, scale 1:31,680 or 1 inch to ½ mile.

Peturrson Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Allanite and uraninite

Location:

Latitude 49°50'13"N Longitude 93° 9'01"W
Tustin Township
Map Reference: ODM Map 2302

Geology:

Uranium mineralization occurs in a zone 360 m by 75 m. This zone consists of coarse-to-medium-grained pink pegmatite and quartz monzonite which parallels the contact between the granite and metavolcanic rocks.

Economic Features:

Assays average 0.56 pounds per ton U_3O_8.

History of Development:

1977: A radiometric survey and five Winkie diamond drill holes totalling 365 feet were carried out by Sherritt Gordon Mines, Limited.

1978: Ground magnetometer, radiometric and spectrometer surveys were completed by Sherritt Gordon Mines, Limited.

Principal References:

OMNR, Resident Geologist's Files, Kenora, Peturrson Lake.

OGS, AFRO, Toronto - Tustin Township Drill Log Report No. 14, 1977.
- Technical File No. 2.2699, Sherritt Gordon Mines, Limited, 1978.
- SMDR File 001134.

Pryslak, A.P.
1974: MacNicol and Tustin Townships, Kenora District; Ontario Division of Mines, Geological Map 2302, scale 1:31,680 or 1 inch to 1/2 mile.

Benchmark Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uranophane

Location:

Latitude 49°53'00"N Longitude 93°21'00"W
Wabigoon Township
Map Reference: OGS Map 2443

Geology:

Radioactive pegmatite was exposed in a roadcut on Highway 105, approximately 800 feet north of the contact between the Wabigoon Belt and the English River Subprovince. Outcrops consist of coarse-grained pegmatite and quartz monzonite which intrudes mafic trondhjemite. The pegmatitic quartz monzonite contains coarse magnetite masses up to 30 mm.

Economic Features:

Radioactivity is associated with the magnetite. Scintillometer readings range up to 20,000 CPM. A grab sample assayed 0.022% U_3O_8 and 15 ppm Thorium.

History of Development:

1977: Geological and scintillometer surveys were completed by the ODM in Kenora.

Principal Reference:

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

OMNR, Resident Geologist's Files, Kenora.

Name and Location:

Belair Lake
Latitude 50°36'30"N Longitude 94°35'35"W
District of Kenora (Patricia Portion)

References:

Beard, R.C., and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and the Kenora Resident Geologist; p.6, in ODM Annual Report of the Regional and Resident Geologists, 1977, edited by C.R. Kustra, 121p.

Breaks, F.W.; Bond, W.D.; MacWilliams, G.H.; Gower, C.F. and Stone, D.
1975a: Marginal Notes for Operation Kenora-Sydney Lake; Ontario Division of Mines, 17p.

Remarks:

This occurrence is situated in the Sydney Lake Cataclastic zone which represents the contact between the Uchi Subprovince to the north and the English River Subprovince. (Breaks et al 1975).

Here is found white, homogeneous diatexite, medium-grained with small spots of relic biotite throughout and 40% paleosome material, occasional pegmatite sections, with moderate cataclasis. Radioactivity was found to be 3 times the background.

Name and Location:

Chase Lake
Latitude 50°35'30"N Longitude 94°53'00"W
District of Kenora (Patricia Portion)

References:

Beard, R.C., and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and the Kenora Resident Geologist; p.6, in ODM Annual Report of the Regional and Resident Geologists, 1977, edited by C.R. Kustra,

Breaks, F.W.; Bond, W.D.; MacWilliams, G.H.; Gower, C.F.; and Stone, D.
1975a: Marginal Notes for Operation Kenora-Sydney Lake; Ontario Division of Mines, 17p.

Remarks:

This occurrence is situated in the Sydney Lake Cataclastic zone which represents the contact between the Uchi Subprovince and the English River Subprovince. (Breaks et al 1975).

Here is found homogeneous diatexite with 1% widely scattered, thin relic bands of sediment up to 15 cm wide, and is slightly cataclastic.

Radioactivity is 3 times the background.

Name and Location:

Coal Creek
Latitude 50° 10' 41" N Longitude 82° 58' 11" W
McBrien Township

References:

Vos, M.A.
1975: Economic Geology of the Cretaceous Deposits, Moose River Basin, Ontario, General Appraisal; Ontario Div. Mines; OFR 5157, 70p., 7 Figures, 2 Tables.

OGS, AFRO, Toronto - Technical File No. 83.1-35, F.R. Joubin and Associates, 1962.
- Techncial File No. 83.1-44, Algoma Central Railway and Hudson's Bay Railway, 1966.
- SMDR File No. 000140.

Remarks:

Uranium occurs in lignite beds which are associated with quartz and kaolin sands. These are contained within the Mattagami Formation.

Name and Location:

Hornby Lake

Latitude	Longitude
52° 31' 30" N	93° 37' 30" W
52° 31' 00" N	93° 35' 30" W
52° 29' 00" N	93° 36' 20" W

District of Kenora (Patricia Portion)

References:

Ayres, L.D., Raudsepp, M., Averill, S.A., and Edwards, G.R.
1973: Favourable Lake-Berens Lake, Kenora District; Ontario Div. Mines, Geological Compilation Map 2262, scale 1:253,440 or 1 inch to 4 miles.

Remarks:

Uranium mineralization is associated with several batholiths in the vicinity of Hornby Lake greenstone belt. In all cases mineralization tends to be near the batholiths.

Name and Location:

Huston Lake
Latitude 50°23'45"N Longitude 95°05'10"W
District of Kenora (Patricia Portion)

References:

Beard, R.C., and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and Kenora Resident Geologist; p.6, in ODM Annual Report of the Regional and Resident Geologists, 1977, edited by C.R. Kustra, 121p.

Breaks, F.W.; Bond, W.D.; MacWilliams, G.H.; Gower, C.F.; and Stone, D.
1975a: Marginal Notes for Operation Kenora-Sydney Lake; Ontario Division of Mines, 17p.

Remarks:

Anomalies in this area reflect a narrow to broad band of supracrustal rocks extending from the Manitoba border to the English River. (Breaks et al 1975b). This unit consists of a sequence of metasediments, mostly greywacke with occasional volcanic sections, all of which have been subjected to anatexis.

At this location, medium-to-fine-grained pink quartz monzonite, nebulitic, containing 10-15% biotite as disseminations and small clumps. Radioactivity is 2½ times the background.

Name and Location:

Johnson Lake
Latitude 50°36'45"N Longitude 95°37'15"W
District of Kenora (Patricia Portion)

References:

Beard, R.C., and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and the Kenora Resident Geologist; p.5, in ODM Annual Report of the Regional and Resident Geologists, 1977, edited by C.R. Kustra, 121p.

Breaks, F.W.; Bond, W.D.; MacWilliams, G.H.; Gower, C.F.; and Stone, D.
1975a: Marginal Notes for Operation Kenora-Sydney Lake; Ontario Division of Mines, 17p.

Remarks:

This occurrence is situated in the Sydney Lake Cataclastic zone which represents the contact between the Uchi Subprovince to the north and the English River Subprovince. (Breaks et al 1975).

Here grey, highly folded quartz-biotite metasediment with occasional (10%) narrow lenses and knots of leucosomes, little cataclasis, radioactivity is 1½ times the background.

Name and Location:

Oak Lake
Latitude 50°24'28"N Longitude 93°56'18"W
District of Kenora

References:

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Lang, A.H.; Griffith, J.W.; and Steacy, H.R.
1962: Oak Lake Occurrence; p.275, in Canadian Deposits of Uranium and Thorium, GSC, Economical Geology Series No. 16 (Second Edition), 324p.

Robertson, J.A.
1968: Oak Lake Occurrence; p.61, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Oak Lake Area, Drill Log Report No. 10.

Remarks:

The uranium mineralization occurs where Early Precambrian pegmatite intrudes the metasediments. The uranium minerals found are monzonite and uraninite. From three diamond drill holes, less than 0.01% U_3O_8 (RE) was found.

Name and Location:

Octopus Lake
Latitude 50°37'45"N Longitude 95°38'35"W
District of Kenora (Patricia Portion)

References:

Beard, R.C., and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and Kenora Resident Geologist; p.5, in ODM Annual Report of the Regional and Resident Geologists, 1977, edited by C.R. Kustra, 121p.

Breaks, F.W.; Bond, W.D.; MacWilliams, G.H.; Gower, C.F.; and Stone, D.
1975a: Marginal Notes for Operation Kenora-Sydney Lake; Ontario Division of Mines, 17p.

Ferguson, S.A.: Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District, ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Remarks:

This occurrence is situated in the Sydney Lake Cataclastic zone which represents the contact between the Uchi Subprovince to the north and the English River Subprovince to the south. (Breaks et al 1975).

Here foliated and sheared granitoid rock, highly cataclastic with coarse augen feldspar, and is highly seritic.

Radioactivity here is fairly low.

Name and Location:

Paddington Lake
Latitude 49°49'58"N Longitude 93°45'46"W
Tustin Township

References:

ODM Property examination - Paddington Lake.

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Remarks:

Radioactivity is widespread in a large mass of granitic pegmatite within volcanic pyroclastics.

A chip sample assayed 0.5% U_3O_8 over 15 feet.

In 1977, prospecting was done by R. Fairservice.

Name and Location:

Paterson Lake
Latitude 50°18'00"N Longitude 94°41'00"W
District of Kenora

References:

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P. 1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

OMNR, Resident Geologist's Files, Kenora.

Remarks:

This property lies within the English River gneiss belt and all of the rocks are of Archean age.

The uraniferous zones contain grandiorite, quartz monzonite, and granite that have intruded into volcanics and greywackes.

Name and Location:

Pineneedle Lake
Latitude 50°46'10"N Longitude 94°34'45"W
District of Kenora

References:

Beard, R.C., and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and the Kenora Resident Geologist; p.6, in ODM Annual Report of the Regional and Resident Geologists 1977, edited by C.R. Kustra, 121p.

Breaks, F.W.; Bond, W.D.; MacWilliams, G.H.; Gower, C.F.; and Stone, D.
1975: Operation Kenora-Sydney Lake, Eagle-Sydney Lakes Sheet, District of Kenora; Ontario Division of Mines, Preliminary Map P.1026, Geological Series, scale 1 inch to 1 mile or 1:63,360. Geology 1974.

Remarks:

This occurrence is situated in the Sydney Lake Cataclastic Zone which represents the contact between the Uchi Subprovince to the north and the English River Subprovince to the south. (Breaks et al 1975). At this site occurs white, inhomogeneous diatexite with 50% paleosome, and is highly cataclastic. Radioactivity is up to two times the background.

Reynar Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 50° 28' 22" N Longitude 95° 07' 45" W
District of Kenora
Map Reference: ODM Map 2175

Geology:

Uranium mineralization is located in pegmatite and hornblende-biotite gneiss.

Economic Features:

Assays from a drill section averaged 1.8% U_3O_8 over 2.0 feet.

History of Development:

1955: Five diamond drill holes were drilled by E. Anderson.

Principal References:

Ferguson, S.A. , Brown, D.D., Davies, J.C., and Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Name and Location:

Sydney Lake
Latitude $50^{\circ}36'45''$N Longitude $94^{\circ}32'40''$W
District of Kenora (Patricia Portion)

References:

Beard, S, and Rivett, S.
1978: 1977 Report of the Northwestern Regional Geologist and Kenora Regional Geologist; p.6, in ODM Annual Report of the Regional and Resident Geologists, 1977, edited by C.R. Kustra, 121p.

Breaks, F.W.; Bond, W.D.; MacWilliams, G.H.; Gower, C.F.; and Stone, D.
1975a: Marginal Notes for Operation Kenora-Sydney Lake; Ontario Division of Mines, 17p.

Ferguson, S.A.; Brown, D.D.; Davies, J.C.; Pryslak, A.P.
1967: Red Lake-Birch Lake Sheet, Kenora District; ODM, Geological Compilation Series, Map 2175, scale 1:253,440 or 1 inch to 4 miles.

Remarks:

This occurrence is situated in the Sydney Lake Cataclastic zone which represents the contact between the Uchi Subprovince to the north and the English River Subprovince to the south. (Breaks et al 1975).

There is a predominance of leucogranite with some sections of relic sedimentary rock at this site.

Name and Location:

L. Parth
Latitude 49°50'05"N Longitude 93°44'18"W
Tustin and Bridges Townships

References:

Lang, A.H.
1952: Parth Property; p.120, in Canadian Deposits of Uranium and Thorium, GSC, Economic Geological Series No. 16 (Interim Account), 173p.

Pryslak, A.P.
1974: MacNicol and Tustin Townships, Kenora District; Ontario Division of Mines, Geological Map 2303, scale 1:31,680 or 1 inch to 1/2 mile.

Robertson, J.A.
1968: Parth Property; p.59, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Remarks:

The main showing consists of pegmatite lenses averaging eight feet wide occurring at intervals over a distance of two miles. One assay showed 0.13% U_3O_8 (RE).

Name and Location:

A.L. Wilson
Latitude 49°50'24"N Longitude 93°40'26"W
Bridges Township

References:

Pryslak, A.P.
1974: MacNicol and Tustin Townships, Kenora District; Ontario Division of Mines, Geological Map 2303, scale 1:31,680 or 1 inch to 1/2 mile.

Robertson, J.A.
1968: A.L. Wilson Occurrence; p.62, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto, Bridges Township, SMDR File 000283.

Remarks:

Uranium mineralization occurs in a pink, medium-to coarse grained pegmatite intrusion. The radioactivity is erratically distributed and is concentrated in biotite-rich zones.

In 1955 one diamond drill hole to 146 feet and two pits were dug by A.L. Wilson.

In 1967 an aeroradiometric survey was completed by Coulee Lead and Zinc Mines Limited.

Name and Location:

Asarco Exploration Company of Canada Limited
Splatter Lake: Latitude 48°56'10"N Longitude 88°38'40"W
Eagle Mountain: Latitude 49°02'00"N Longitude 88°35'00"W
McMaster Township

References:

Coates, M.E.
1967: Shillabear Creek Sheet, Thunder Bay District; ODMNA, Map 2236, scale 1:63,360 or 1 inch to 1 mile.

OGS, AFRO, Toronto - Technical File No. 2.3105, Asarco Exploration Company of Canada Limited.

Remarks:

This area is underlain by red, fine-grained sandstones of the Sibley Group. At least one diabase dike and a diabase sill intrude these sandstones.

In 1977, Asarco Exploration Company of Canada Limited undertook a lake sediment sampling program in the Wolf River area. The two most important areas in the study were the Splatter Lake area and the Eagle Mountain area.

The average value of uranium found in the sediments was 4.02 parts per million.

Name and Location:

Viceroy Uranium Corporation Limited
Latitude 49°48'36"N Longitude 93°59'54"W
MacNicol Township

References:

Pryslak, A.P.
1976: Viceroy Uranium Corporation Limited; p.51, in Geology of Bruin Lake-Edison Lake Area, ODM, GR No. 130, 61p.

Pryslak, A.P.
1974: MacNicol and Tustin Townships, Kenora District; Ontario Division of Mines, Geological Map 2302, scale 1:31,680 or 1 inch to 1/2 mile.

OMNR, Resident Geologist's Files, Kenora.

Remarks:

Uranium mineralization occurs in vaguely foliated, grey to slightly pinkish grandiorite. Pegmatite is present. Some sections resemble assimilated metasediments or volcanics, including biotite gneisses.

In 1955 trenching and six diamond drill holes were drilled by Viceroy Uranium Corporation Limited.

Name and Location:

Bee Lake
Latitude 49° 50' 48" N Longitude 93° 50' 39" W
Tustin Township

References:

Pryslak, A.P.
1976: Bee Lake Occurrence; p.36, in Geology of the Bruin Lake-Edison Lake Area, District of Kenora; ODM Geoscience Report 130, 61 p. Accompanied by Maps 2302 and 2303, scale 1:31,680 or 1 inch to ½ mile.

OGS, AFRO, Toronto - Technical File No. 63.923, Tustin Mines Limited, 1958.
- SMDR File no. 000291.

Remarks;

Uranium mineralization is contained in an irregular pegmatite mass with a maximum thickness of 100 feet and a length of 2,700 feet. The dike decreases in thickness with depth. The dike trends N 80° W and dips 30° to 60° N.

Radioactivity levels were up to 8 times the background.

Name and Location:

Quibell (Other name Meehan)
Latitude 49°57'21"N Longitude 93°27'12"W
Wabigoon Township

References:

Blackburn, C.E.
1978: Kenora-Fort Frances, Kenora and Rainy River Districts; OGS, Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Quibell Occurrence; p.59, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File 000292.

Remarks:

The uranium mineralization occurs in lenses and dikes of granite and pegmatite cutting greenstone which in places is gneissic or schistose. Graphite molybdenite and pyrite have been identified.

Pickle Crow Gold Mines, Ltd. Occurrence

Commodity:

Uranium, gold and copper

Radioactive Minerals

Pitchblende

Location:

Latitude 46°46'05"N Longitude 80°15'40"W
Pardo Township
Map Reference: OGS Map 2361

Geology:

Uranium mineralization is found in a quartz-pebble conglomerate, 2 to 40 feet thick which locally grades into quartzite. In this area, the radioactive horizon forms a sinuous arc opening to the south.

Economic Features:

In 9 ddh's an average thickness of 16.3 feet of conglomerate gave analyses of 0.02 to 0.08 percent U_3O_8.

History of Development:

1956-1957: Extensive surface work, geologic mapping 16 ddh's totalling 10,882 feet.

1969: Airborne electromagnetic and magnetic surveys were completed by Kennco Explorations Ltd.

Principal References:

Card, K.D., and Lumbers, S.B.
1977: Sudbury-Cobalt, Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury and Timiskaming District, Ontario Ministry of Natural Resources, Geological Compilation Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.:
1968: Pickle Crow Gold Mines Limited; p.63 in Uranium and Thorium Deposits of Northern Ontario, Ontario Division of Mines, Mineral Resources Circular No. 9, 106p.

OGS, AFRO, Toronto - Pardo Township
Technical File No.,63.2445, Kennco Explorations, Limited, 1969.
Drill Log Report No. 11, Pickle Crow Gold Mines Limited, 1956.
SMDR File No. 00318.

Name and Location:

J.P. Neil
Latitude 47°02'00"N Longitude 79°49'00"W
Strathcona Township

References:

Card, K.D., and Lumbers, S.B.
1975: Sudbury-Cobalt, Districts of Cochrane, Sudbury, and Timiskaming, Ontario Division of Mines, Map 2361. Geological Compilation Series Scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto
- SMDR File - Strathcona Township

Robertson, J.A.
1968: J.P. Neil Occurrence; p.64 in Uranium and Thorium Deposits of Northern Ontario, Ontario Division of Mines, Mineral Resources Circular No.9.

Remarks:

Four small, highly radioactive areas were discovered. Three of these areas contain quartz veins.
No other information was given.

Prosco Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 49' 21" N Longitude 80° 05' 10 W
Vogt Township
Map Reference: ODM Map 2048

Geology:

Uranium mineralization occurs in the basal beds of the Huronian Supergroup. In this area it is generally associated with the Matinenda and Mississagi Formations of the Elliot Lake Group. They are composed of quartzite and a quartz-pebble conglomerate.

Drilling established uranium and gold at depths of 200 and 300 feet.

Economic Features:

The best assays were from material of the Aubay Uranium Mines in 1955 and 1956. Values found were 0.02 to 0.038% U_3O_8. (OGS, AFRO, Toronto, Technical File No. 63.2642)

History of Development:

1955: Four diamond drill holes totalling 2,100 feet were drilled by Algoma Gold Mines Limited.

1955-1956: Seven diamond drill holes totalling 1,716 feet and a magnetic survey was completed by Aubay Uranium Mines Limited.

1958: Eight diamond drill holes totalling 1,842 feet were drilled by Prosco Mines Limited.

1969: Geological, magnetometer, electromagnetic, and scintillometer surveys were carried out by the Keevil Mining Group.

1973: Surface prospecting was carried out by the Gowganda Syndicate.

1974: This property was owned by Rand Reef Mines Limited.

1975: Rand Reef Mines Limited carried out a geological survey.

1976: Rand Reef Mines Limited completed an aeromagnetic survey on the Lake Temagami property.

Principal References:

Robertson, J.A.
1968: Aubay Uranium Mines Limited; p.63, in Uranium and Thorium Deposits of Northern Ontario; ODM, MRC No.9 ,106p.

Thomson, J.E.
1960: Prosco Limited; p.36-37, in Uranium and Thorium Deposits at the Base of the Huronian System in the District of Sudbury; ODM Geological Report No. 1, 40p.

OGS, AFRO, Toronto - Technical File No. 63,2642, Keevil Mining Group Limited, 1970.
- Technical File No. 63.3287, Rand Reef Mines Limited, 1974.
- Technical File No. 2.1848, Rand Reef Mines Limited, 1975.
- Technical File No. 2.050, Rand Reef Mines Limited, 1976.
- SMDR File No. 000322.

Name and Location:

Heward Lake
Latitude 48°46'00"N Longitude 91°09'00"W
Trottier Township

References:

Pirie, J.
1978: Crooked Pine Lake, Rainy River District; OGS, Map 2405, scale 1:31,680 or 1 inch to 1/2 mile.

Remarks:

This occurrence is situated in a metasedimentary migmatite in muscovite graphic granite pegmatite.

Mainville Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 48° 49' 08" N Longitude 93° 10' 43" W
Rainy River District
Map Reference: ODM Map 2443

Geology:

Radioactivity is associated with a sill of coarse- to medium-grained quartz-orthoclase, pegmatite within quartz-biotite metasediments. Some staining and molybdenum is reported.

Economic Features:

Samples taken and ssayed by the ODM assayed from 0.005 to 0.017% U_3O_8.

History of Development:

1955-1957: Thirteen diamond drill holes totalling 1,170 feet were drilled. Geological and radiometric surveys were completed by Rainy Lake Mining Company Limited.

Principal References:

OMNR, Resident Geologist's Files, Kenora.

Blackburn, C.E.
1981: Kenora-Fort Francis, Kenora and Rainy River Districts; Ontario Geological Survey , Geological Compilation Series, Map 2443, scale 1:253,440 or 1 inch to 4 miles.

Broulan Reef Mines Limited Occurrence
Central

Commodity:

Uranium and Thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°20'52"N Longitude 81°46'23"W
Baldwin Township
Map Reference: OGS Map 2361

Geology:

Radioactive quartz-pebble conglomerate beds outcrop intermittently along a strike length of 3,000 feet.

Economic Features:

In 1966 and 1967, Broulan Reef Mines Limited assayed samples from drill holes and trenches. The average value for uranium was 1.5 pounds per ton over 3.7 feet, from the drill holes. From the trenches assays showed 1.2 pounds ThO_2 over 2.0 feet.

History of Development:

1966-1967: A geological survey of the area was completed. Three trenches and 14 drill holes totalling 2,806 feet were drilled.

An airborne electromagnetic and radiometric survey was carried out by Broulan Reef Mines Limited.

1970: Conrad Springer drilled 3 diamond drill holes.

1976: Magnetic and radiometric surveys were carried out by the Glencair Mining Company Limited.

1977: Prospecting was carried out by the Glencair Mining Company Limited.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Broulan Reef Mines Limited; p.65-66 *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto
- Baldwin Township, Drill Log Report No. 34, Broulan Reef Mines Limited, 1966-1967.
- Technical File No. 63.2211, Broulan Reef Mines Limited, 1967-1968.
- Technical File No. 2.2275, Glencair Mining Company Limited, 1976.
- Technical File No. 2.2377, 1977.
- Technical File No. 63.3479, Glencair Mining Company Limited
- SMDR File No. 00420

OMNR Regional Geologists Files - Sudbury File S63-857

Broulan Reef Mines Limited Occurrence
Lookout Tower

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°20'45"N Longitude 81°42'45"W
Baldwin Township
Map Reference: ODM Map 1952-1

Geology:

Radioactivity is associated with quartz-pebble conflomerate lenses that occur in the quartzites of the Matinenda Formation. Three radioactive zones were discovered. The average length is 106 feet and average width approximately 2.0 feet.

Economic Features:

Assays from samples of the Dominion Gulf Company from Lot 3, Concession V were 0.12% U_3O_8 (RE) and 0.04% U_3O_8 (chem) (ODM, 1960, GR 1, p.26)

History of Development:

1953-1954: Geological, radiometric and magnetic surveys were performed by Dominion Gulf Company.

1966-1967: Geological and geophysical airborne surveys were completed by Broulan Reef Mines Limited.

1969: One drill hole totalling 1,004 feet was drilled by Broulan Reef Mines Limited.

Principal References:

Card, K.D., and Innes, D.G.
1972: Matinenda Formation; in Baldwin Township in Elliot Lake Group, Open File Report No. 5107.

Thomson, J.E., Geology of Baldwin Township p.33 in ODM Annual Report, Vol.61, part 4, 1952-1.

OGS, AFRO, Toronto - Baldwin Township, Drill Log Report No.29, Broulan Reef Mines Limited, 1969
- Technical File No. 63.512, Dominion Gulf Company 1954.
- Technical File No. 63.2211, Broulan Reef Mines Limited, 1968.
- SMDR File No. 000379

Canadian Johns-Manville Company Limited
Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°20'08" Longitude 81°43'00"
Baldwin Township
Map Reference: OGS Map 2361

Geology:

Radioactivity is associated with quartz-pebble conglomerate embedded in quartzite.

Economic Features:

Assays from a single drill hole graded 0.60 pounds per ton U_3O_8 over 1.1 feet.

History of Development:

1966-1967: A single diamond drill hole totalling 2,378 feet, and a wedge of 548 feet was completed by Canadian Johns-Manville Company Limited.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
  1968: Canadian Johns-Manville Company Limited, p.66 in
        Uranium and Thorium Deposits of Northern Ontario, ODM
        MRC No.9, 106p.

OGS, AFRO, Toronto - Baldwin Township, Drill Log Report No.22
                     Canadian Johns-Manville, 1966-1967,
                   - SMDR File No. 000380.

Jellicoe Mines (1939) Limited Occurrence
Espanola Bay Area

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°20'35"N Longitude 81°44'35"W
Baldwin Township
Map Reference: Map 2361

Geology:

Radioactivity is associated with quartz-pebble conglomerate interbedded with quartzite.

Economic Features:

In 1954 Plum Uranium and Metal Mining Company Limited drilled eight diamond drill holes. The average assay was 0.088 percent U_3O_8 over 3.5 feet.

In 1967, Consolidated Montclerg Mines Limited performed further drilling. The average assay was 0.054 percent U_3O_8 over 6.5 feet.

History of Development:

1954-1955: Five diamond drill holes were drilled by Jellicoe Mines (1939) Limited totalling 1,889 feet.

1978: One diamond drill hole was drilled by Consolidated Morrison Exploration Limited.

Evenlode Gold Mines performed an electromagentic survey.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Consolidated Montclerg Mines Limited; p.67-68 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC no.9, 106 p.

OGS, AFRO, Toronto - Baldwin Township, Drill Log Report No. 32 Jellicoe Mines Limited (1939) 1954
- Baldwin Township, Drill Log Report No. 40 Consolidated Morrison Exploration Limited, 1978
- Technical File No. 63.1049, Evenlode Gold Mines Limited
- SMDR File No. 00384

Jellicoe Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°20'14"N Longitude 81°45'28"W
Baldwin Township
Map Reference: OGS Map 2361

Geology:

Radioactivity is associated with the quartz-pebble conglomerate situated in bands that strike east and dip approximately 45 to 70 degrees north.

Economic Features:

Six drill holes were drilled on the southeast one-quarter of the north half of Lot 7, Concession V. Assays of samples taken were 0.03% U_3O_8 (chem) over 3.5 feet, and 0.01% U_3O_8 (RE) over 3.0 feet.

History of Development:

1954: Geological mapping and magnetometer survey were completed by Jellicoe Mines (1939) Limited

1955: Trenching and diamond drilling of 29 holes totalling 6,445 feet for Jellicoe Mines (1939) Limited

1967: Denison Mines Limited completed an airborne geophysical survey.

A geophysical survey was completed on the Burns and Maki option by Mattagami Mines Limited.

1975: Five diamond drill holes were drilled by Mattagami Mines Limited.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoms, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District: Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Consolidated Montclerg Mines Limited; p.67-68 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - Baldwin Township, Drill Log Report No.11, Jellicoe Mines Limited (1939), 1954
- Baldwin Township, Drill Log Report No.36, Mattagami Mines Limited, 1975
- Technical File No. 2.1774, Mattagami Mines Limited
- Technical File No. 63.2170, Denison Mines Limited, 1967.
- SMDR File No. 000383

Plum Uranium and Metal Mining Company Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°19'18"N Longitude 81°43'52"W
Baldwin Township
Map Reference: OGS Map 2361

Geology:

A zone of radioactive quartzite and conglomerate is contained in the quartzite formation and has a width of 1 to 9 feet over a strike length of 600 feet and to a slope depth of 185 feet.

Economic Features:

The best assay recorded by Plum Uranium and Metal Mining Company Limited in 1954 was 0.069% U_3O_8 over 6.2 feet.

History of Development:

1916: Prospecting was carried out by Nickol Chemical Company.

1952: An aeromagnetic and scintillometer survey was completed by the Ontario Dept. of Mines.

1954: Twelve drill holes totalling 1,908 feet, magnetometer and a geological survey was carried out by Plum Uranium and Metal Mines Limited.

1954-1955: Twenty-nine drill holes totalling 6,445 feet were drilled by Jellicoe Mines (1939) Limited.

1960: An electromagnetic survey was completed by Evenlode Mines Limited.

1966: Six drill holes totalling 1,655 feet were completed by Consolidated Montclerg Mines Limited.

1967: Diamond drilling was carried out by Denison Mines Limited.

1976: Geological mapping and a gamma ray spectrometer survey was carried out by D.S. Robertson and Associates Limited.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Thomson, J.E.
1952: Geology of Baldwin Township *in* ODM Annual Report, Vol.61, pt.4.

Robertson, J.A.
1968: Consolidated Montclerg Mines Limited; p.67-68 *in* *Uranium and Thorium Deposits of Northern Ontario*, ODM, MRC, No.9, 106p.

OGS, AFRO, Toronto
- Baldwin Township, Drill Log Report No.10, Plum Uranium and Metal Mining Limited, 1954
- Baldwin Township, Drill Log Report No.21 Consolidated Montclerg Mines Limited, 1967
- Technical File No. 63.435, Plum Uranium and Metal Mining Limited, 1954.
- Technical File No. 2.2373, D.S. Robertson and Associates Limited.

L. Leslie Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite

Location:

Latitude 46°55'33"N Longitude 81°03'47"W
Creelman Township
Map Reference: ODM Map 2212

Geology:

Uraninite has been found in the bedded argillite of the Elliot Lake and Hough Lake Groups.

Economic Features:

No. 1 Zone consists of a radioactive argillite bed 18 inches thick striking south 80 degrees east and dipping 55 degrees north. Assays gave 0.48% U_3O_8 (chem) and 0.05% ThO_2 (chem) and 0.065% U_3O_8.

No. 2 Zone consists of interbedded argillite and conglomerate. Samples assayed 0.08% U_3O_8 (RE).

History of Development:

1954: A geiger counter survey, 14 drill holes totalling 3,635 feet were all completed by MacLeod-Cockshutt Gold Mines Limited and Kenogamisis Gold Mines.

1957: Geological mapping was completed by Rio Tinto Canadian Exploration Limited.

1967: Assembly Mines Limited drilled diamond drill holes totalling 10,554 feet.

1973: An airborne geophysical survey was completed by Gulf Minerals Canada Limited.

1976: An airborne gamma ray spectrometer survey was completed by Ingamar Exploration.

Erana Mines completed a geophysical and radiometric survey.

1978: Issac Burns Exploration Company Limited completed an airborne magnetometer survey.

1979: TX Resources Limited performed a gamma ray spectrometer survey.

Principal References:

Meyn, H.D.
1971: Leslie Showing and North Creelman Location; p.39-41 in Geology of Roberts,Creelamn, and Fraleck Townships, District of Sudbury, ODM GR 91, 48p. Accompanied by Map 2212, scale 1 inch to 1/4 mile.

OGS, AFRO, Toronto - Creelamn Township, Drill Log Report No.10, MacLeod-Cockshutt Gold Mines Limited, 1954
- Drill Log Report No. 11,12, Assemby Mines Limited, 1967,1968
- Technical File No. 63A 338, Leslie Uranium Option, 1957-1958.
- Technical File No. 2.1214, Gulf Minerals Canada Limited, 1973
- Technical File No. 2.2307, Ingamar Explorations Limited, 1978.
- Technical File No. 2.2994, TX Resources Limited, 1979
- Technical File No. 2.2306, Erana Mines Limited, 1976
- Technical File No. 2.2850, Issac Burns Explorations Limited, 1978
- SMDR File No. 000388.

W. Alanen and E. Maki Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 24' 43" N Longitude 81° 29' 42" W
Drury Township
Map Reference: OGS Map 2361

Geology:

A thinly bedded band of quartzite at 1,400 and 2,00 feet lies on top of the basal member and conatins rusty, radioactive, sheared quartz-pebble conglomerate.

Economic Features:

Mr. W. Alanen assayed a grab sample at 0.61 % U_3O_8 (chem) and 0.30% ThO_2 (chem).
A sample taken by J.E. Thomson from a conglomerate bed 1.5 feet wide assayed 0.38% U_3O_8 and 0.10% ThO_2.(chem)
A report from the Acme Gas and Oil Company from 2 drill holes intersected a minimum of 6 beds across a width of 600 feet. Grades os samples from this drilling varied from 1.56 pounds over 20 feet to 1.8 pounds over 4.5 feet.

History of Development:

pre 1955: Pitting by W. Alanen.

1955: W. Alanen drilled a total of 322 feet.

1967: Two drill holes totalling 223 fett were drilled by Acme Oil and Gas Company Limited.

1975: Espina Copper Development drilled some diamond drill holes.

Principal References:

Robertson, J.A.
1968: W. Alanen and E. Maki Occurrence; p. 70-71, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

OGS, AFRO, Toronto - Drury Toenship, Drill Log Report No. 13, Alanen and Maki, 1955.
- Technical File No. 63.717, Garrison Harbour Mines Limited , 1956.
- Technical File No. 63.2155, B.W. Lang, 1967.
- Drury Township, Drill Log Report No. 20, Acme Oil and Gas Company Limited, 1967.
- Technical File No. 2.378, Acme Oil and Gas Company Limited, 1971.
- SMDR File No. 000392.

OMNR Regional Geologists Files, Sudbury - S63. 117, S63.122.

Kerr Addison Mines Limited Prospect

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°24'36"N Longitude 81°32'07"W
Drury Township
Map Reference: OGS Map 2361

Geology:

Two radioactive zones were found trending in a southeasterly direction, following the contact direction trend.

The first radioactive zone lies within the basal metasedimentary formation which overlies the granitic volcanic basement and underlies the main quartzite formation.

Several horizons of radioactive quartz-pebble conglomerate beds occur in this zone. One is within 100 to 200 feet of the basement and extends for a strike length of 3,000 feet.

Economic Features:

Assays from samples were 0.24% U_3O_8 and 0.30% ThO_2 (chem).

A grab sample taken from radioactive conglomerate assayed 0.11% U_3O_8 and 0.05% U_3O_8.

A second zone of radioactivity lies within the main quartzite formation. It consists of 6 inch to 2 foot lensic pebble-conglomerate bodies traceable for 2,500 feet. The average assay was 0.80 pounds per ton U_3O_8.

History of Development:

1956: A geological survey was completed by Sagamore Explorations Limited.

1957: Six drill holes totalling 905 feet were drilled by Insco Mines Limited.

1958: Surfacial geology, a radiometric survey and trenching was completed by Cody-Reco Mines Limited.

Six drill holes were drilled by United MacFie.

1966: Three drill holes were completed by Kerr Addison Mines Limited.

1968-1969: Several trenches, pits and 14 drill holes totalling 9,200 feet were completed by Acme Gas and Oil Company Limited.

1976: Kerr Addison completed a geological, geophysical, and radiometric survey.

1977: Kerr Addison drilled 8diamond drill holes.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Subury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Acme Oil and Gas Limited; p.70-71 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9, 106P.

Thomson, J.E.
1960: Alford Explorations Limited; p.19-22 in Uranium and Thorium Deposits at the Base of the Huronian System in the District of Sudbury, ODM Geological Report No. 1 40 p.

OGS, AFRO, Toronto
- Drury Township, Drill Log Report Nos. 22,23 Acme Gas and Oil Co. Ltd., 1968-69
- Technical File No. 2.378 Acme Gas and Oil Co. Ltd. 1969-71
- Technical File No. 2.2229, Kerr Addison Mines Limited 1976
- SMDR File No. 000391
- Drill Log Report No. 30, Kerr Addison Mines Ltd. 1977

Balboa Uranium Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°36'36"N Longitude 81°37'15"W
Ermatinger Township
Map Reference: OGS Map 2361

Geology:

Spotty radioactivity increases towards the basement contact and occurs in quartzites and conglomerates. The beds dip steeply to the northwest.

Economic Features:

The best assay was 0.042 percent U_3O_8 (chemical). Deeper drilling indicated 0.01% U_3O_8 and 0.03 % ThO_2 (RE) over 3.0 feet.

History of Development:

1957-1959: Trenching, pitting and five drill holes were completed by Alcourt Mines Limited

1968: Geological and geophysical exploration of the area was completed by Balboa Uranium Mines Limited.

1974-1975: An airborne geophysical survey was completed by Consolidated Morrison Explorations Limited.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253;440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Balboa Uranium Mines Limited; p.71 *in* Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9, 106p.

Thomson, J.E.
1968: Alcourt Mines Limited, p.20 - 21, *in* Uranium and Thorium Deposits at the Base of the Huronian System in the District of Sudbury, ODM, Geological Report No.1, 40p.

OGS, AFRO, Toronto - Ermatinger Township, Drill Log Report, Alcourt Mines Limited and Balboa Uranium Mines Limited, 1968.
- Technical File No. 63.2307, Balboa Uranium Mines Limited, 1968.
- Technical File No. 2.1671, Consolidated Morrison Explorations Limited.
- SMDR File No. 000394.

Canadian Johns-Manville Company Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47°01'40"N Longitude 80°52'54"W
Grigg Township
Map Reference: OGS Map 2361

Geology:

The metasediments are thought to be equivalent to those of the Elliot Lake and Hough Lake Groups. They are exposed along the central part of Grigg Township, along the Wanapitei River.

Economic Features:

The first diamond drill hole graded 0.77, 0.56, and 0.47 pounds per ton U_3O_8 over 2.3, 1.0, and 4.0 feet respectively.

History of Development:

1967: Airborne radiometric, magnetic and radiometric surveys and geological mapping was completed by Canadian Johns-Manville Company Limited.

1967-1971: Thirteen diamond drill holes totalling 4,737 feet were drilled by Canadian Johns-Manville Company Limited. They also prepared a geological and airborne geophysical report.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation series map 2361, scale 1:253,440 or 1 inch to 4 miles.

Meyn, H.D.
1972: Canadian Johns-Manville Company Limited; p.32 in Geology of Grigg and Stobie Townships, District of Sudbury, Ontario Department of Mines and Northern Affairs, Geological Deposit 100, 38p. Accompanied by map 2238, Scale 1 inch to 1/2 mile.

Robertson, J.A.
1968: Canadian Johns-Manville Company Limited p.72 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9, 106p.

OGS, AFRO, Toronto - Grigg Township, Drill Log Report No.10, Canadian Johns-Manville Company Limited, 1967-1971.
- Technical File No. 63A 548, Canadian Johns-Manville Company Limited, 1969.
- Technical File No.63.2277A, Canadian Johns-Manville Company Limited, 1967.
- SMDR File No. 000396

Aggressive Mining Company, Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°16'13"N Longitude 81°52'58"W
Hallam Township
Map Reference: OGS Map 2361

Geology:

Huronian metasediments are exposed at the surface across seventeen feet. They are thought to belong to the Elliot Lake Group. They are comprised of feldspathic quartzite, quartz-pebble conglomerate, arkose, protoquartzite and greywacke. The radioactive zone is confined to the northwest corner of the claim and extends northward for 9,000 feet.

Economic Features:

Four thousand feet south of the main conflomerate-granite contact assays from core samples yielded 0.3% U_3O_8 over 0.7 feet and 0.06% U_3O_8 (RE).

History of Development:

1955: Seven drill holes totalling 2,260 feet were drilled by International Cobalt and Silver Mining Limited.

1955 - 1956: Five drill holes totalling 1,400 feet and seven trenches were completed by Aggressive Mining Company, Limited.

1957: Three drill holes totalling 1,197 feet were drilled by Delcan Minerals Limited and Cleveland Copper Corporation.

1969: Two drill holes totalling 2,504 feet were drilled by Aggressive Mining Limited.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt, Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Delcan Minerals Limited p.85 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No. 9, 106 p.

The Northern Miner, Aggressive Mining Cuts Uranium Section Drill Two Groups. p. 18 in The Northern Miner, Jan 2, 1969.

OGS, AFRO, Toronto
- Hallam Township, Drill Log Report No. 11, Aggressive Mining Company Limited, 1955-1969.
- SMDR File No. 000397.

Assembly Mines Limited Occurrence

Commodity:

Uranium, Thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°50'35"N Longitude 80°59'35"W
Hutton Township
Map Reference: OGS Map 2361

Geology:

Uranium mineralization occurs in a pyritiferous quartz-pebble conglomerate at or near the base of the Huronian metasedimentary sequence.

Economic Features:

The best assays averaged 0.20% U_3O_8 and 0.08% ThO_2.

History of Development:

1955-1956: Geological and geophysical surveys were completed by Fano Uranium Mines Limited.

1955-1958: Several test pits and three drill holes totalling 2,463 feet were completed by Assembly Mines Limited.

1967: Four drill holes totalling 1,413 feet were drilled by Assembly Mines Limited.

1969: A geological survey was completed by International Mine Services Limited.

1973: An airborne geophysical survey was completed by Gulf Minerals Canada Limited.

1975: The Hanna Mining Co. Ltd. completed a radiometric report.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Meyn, H.D.
1970: Assembly Mines Limited p. 64-65 in Geology of Hutton and Parkin Townships, ODM Geological Report No. 80, 78 p.

OGS, AFRO, Toronto - Hutton Tp., Drill Log Report No. 18, Assembly Mines Ltd., 1967-1968.
- Technical File No. 63A.533, International Mine Services Limited, 1969.
- Technical File No. 2.1214, Gulf Minerals Ltd. 1973.
- SMDR File No. 2.2252, Hanna Mining Co. Ltd. 1975

OMNR, Regional Geologists Files
- Sudbury Files S63-207, Sudbury - Assembly Mines Limited

Assembly Mines Limited Occurrence (1A)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°52'23"N Longitude 81°01'19"W
Hutton Township
Map Reference: ODM Map 2361

Geology:

Quartz-pebble conglomerate and quartzite lie on granitic rocks.

Economic Features:

Three shallow holes were drilled in 1955 and all encountered interbedded conglomerate and argillites. The available assays show an average of 0.06% U_3O_8.

History of Development:

1954-1955: Several small trenches and four drill holes totalling 21 feet were completed by Doyon, MacLeod, MacIntosh and Associates.

1966: Nine trenches and four drill holes were completed by Assembly Mines Limited.

1970: A geological survey was completed by Gui-Por Uranium and Metal Mines Limited.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Meyn, H.D.
1970: Assembly Mines Limited, Claims at 1A p.64-65 in Geology of Hutton and Parking Townships, ODM, Geological Report No.80, 78p.

OGS, AFRO, Toronto - Hutton Township, Drill Log Report No.12 MacIntosh and Associates, 1970
- Technical File No.63A,558, Gui-Por Uranium and Metal Limited, 1970
- SMDR File No. 000400

Noranda Mines Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°23'08"N Longitude 81°40'10"W
Hyman Township
Map Reference: OGS Map 2361

Geology:

Uranium mineralization is associated with interbeds of quartz-pebble conglomerate in the quartzite.

Economic Features:

Eight showings of uranium mineralization occur on the property. The most important is the Ridge Showing. Assays averaged 0.28 percent U_3O_8 across 2.0 feet for a length of 123 feet. Several drill holes were drilled here. The best assay was 0.098 percent U_3O_8 over 3.0 feet.

The Cabin Zone 600 feet northwest of the Ridge Zone assayed 0.17% U_3O_8 and 0.06% ThO_2 (RE). Samples from the Island Zone assayed 0.152% U_3O_8 (RE) across 8 feet.

Hilltop Zone samples assayed 0.182 percent U_3O_8 (RE).

History of Development:

1953-1954: Radiometric, geological, and geiger surveys were completed by Noranda Mines Limited.

1954: Eighteen diamond drill holes totalling 3,093 feet were drilled by Noranda Mines Limited.

1976: A.E. Rose completed a radiometric survey.

1977: Two diamond drill holes were drilled totalling 1,919 feet by Kerr Addison Mines Limited.

Consolidated Morrison Explorations Limited drilled 6 diamond drill holes.

1978: One diamond drill hole totalling 3,416 feet was drilled by Consolidated Morrison Explorations Limited.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series, Map 2361 scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Noranda Mines Limited, John Creek Bay Occurrence; p.76-77 in Uranium and Thorium Deposits of Northern Ontario ODM MRC No.9, 106p.

OGS, AFRO, Toronto - Hyman Township, Drill Log Report No. 22,23 Consolidated Morrison Explorations Limited 1977-1978
- Hyman Township, Drill Log Report No. 20 Kerr Addison Mines Limited, 1977
- Hyman Township, Drill Log Report No.10 Noranda Mines Limited, 1954
- Technical File No. 63.513, Noranda Mines Limited, 1953-1954
- Technical File No. 2.2112, A.E. Rose 1976
- SMDR File No. 000404

Agnew Lake Mines Limited Occurrence

Commodity:

Uranium, thorium, and yttrium.

Radioactive Minerals:

Uranothorite, monazite, and uraninite.

Location:

Latitude 46° 25' 59" N Longitude 81° 37' 30" W
Hyman Township
Map Reference: OGS Map 2361

Geology:

Radioactive minerals are found in quartz-pebble conglomerate, which is interbedded with sericitic quartzite and argillite. There is an indicated recoverable amounts of yttrium oxide. The deposit consists of three zones, No. 3 subdivided into 3A, 3B, and 3C.
Zone No. 1 occurs in quartzites.
Zone No. 2 occurs in coarse sericitic quartzites.
Zone No. 3 occurs in parallel beds of conglomerate.

Economic Features:

As of December 1, 1980 estimated 5,803,000 tons of mineral reserves in the proven and probable category at 1.0 pound per ton U_3O_8. (Kerr Addison Mines Limited, Company Annual Report)

History of Development:

1954-1955: Diamond drilling totalling 36,100 feet was carried out by New Thurbois Mines Limited.

1956: Geological and ground geophysical surveys were carried out by Agnew Lake Mines Limited.

1956-1966: Diamond drilling totalling 21,400 feet was carried out by Quebec Mattagami Mines Limited.

1967-1968: No. 1 shaft was carried to 1,400 feet, Sixty-four drill holes totalling 18,430 feet were drilled by Agnew Lake Mines Limited.

1970: Drifting and crosscutting totalling 8,809 feet, 1,802 feet of raising and 20,091 feet of drilling was completed by Agnew Lake Mines Limited.

Work was suspended in late 1970 due to low uranium prices.

1974: The mine was dewatered to the 1,750 foot level and a two year program of surface leaching began.

1976: Lateral development was up to 20,772 feet. Total diamond drilling from the surface was 2,120 feet and 36,560 feet from underground.

1977: Production resumed. At the end of 1976, 300,000 tons of ore were available for leaching.

1979: Mine development totalled 29,047 feet consisting of 25,047 feet of drives and 4,000 feet of raises. The mine produced 448,000 pounds of U_3O_8.

1980: Production increased despite plans to phase out operations. The mine produced 507,000 pounds of U_3O_8. As of December 7, 1980 estimated 5,803,000 tons of mineral resources in the proven and probable category at 1.0 pound U_3O_8 per ton.

Principal References:

Kerr Addison Mines Limited, Annual Report.

Thomson, J.E.
1961: Canadian Thorium Corporation Limited; p. 22-24, in Uranium and Thorium Deposits at the base of the Huronian System in the District of Sudbury, ODM, Geological Report 1, 40p. Accompanied by Charts a to K.

Robertson, J.A.
1968: Agnew Lake Mines Limited; p.74, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No.9, 106p.

OGS, AFRO, Toronto - Hyman Township, Drill Log Report No. 13, New Thurbois Mines Limited 1954-1955.
- Hyman Township, Drill Log Report No. 18, Agnew Lake Mines Limited., 1965-1966.
- Technical File No. 63A. 276, Agnew Lake Mines Limited, 1956.

OMNR Regional Geologists Files - S63.217, New Thurbois Mines Limited.
- S63.751, Kerr Addison Mines Limited.

East Bay Gold Mines Limited Occurrence

Commodity:

Uranium and Thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°25'32"N Longitude 81°40'38"W
Hyman Township
Map Reference: OGS Map 2361

Geology:

Several major faults cut the area. A number of radioactive beds have been found in polymictic conglomerate where the Sealine and Cygnet faults cut each other.

Economic Features:

Two of these conglomerate beds were trenched north of John Creek. A sample assayed 3.62 pounds per ton U_3O_8 and 2.84 pounds per ton ThO_2 over 1.5 feet. Other assays from these beds were 1.08 pounds per ton U_3O_8 and 1.34 pounds per ton ThO_2 over 5.5 feet.

History of Development:

1967: A radiometric and geological survey and five drill holes totalling 1,084 feet were completed by East Bay Gold Mines Limited.

1968-1969: Four drill holes totalling 5,219 feet and some trenching was performed by Monteagle Minerals Limited.

1969-1970: Seven drill holes totalling 8,000 feet were drilled by Imperial Oil Enterprises.

1976: E.A. Rose completed a radiometric survey.

1977: Two diamond drill holes totalling 1,919 feet were drilled by Kerr Addison Mines Limited.

Consolidated Morrison drilled six diamond drill holes.

1978: One diamond drill hole totalling 3,146 feet was drilled by Consolidated Morrison Explorations Limited.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: East Bay Gold Mines Limited; p.76 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto
- Hyman Township, Drill Log Report No. 14, East Bay Gold Mines Limited, 1967-1969.
- Technical File No. 63.2176, East Bay Gold Mines Limited, 1967-1968.
- Technical File No. 2.2112, E.A. Rose, 1976
- Technical File No. 2.1800, E.A. Rose, 1975
- SMDR File No. 000403

Picton Uranium Mines Limited - LeClerc Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°40'55"N Longitude 80°46'22"W
MacLennan Township
Map Reference: ODM Map 2009

Geology:

Radioactive quartz-pebble conglomerate is exposed at four places along the west shore of Massey Bay, Wanapitei Lake. It contains quartz and chert pebbles in an arkose matrix with sparse to profuse pyrite mineralization.

Economic Features:

Representative samples taken assayed 0.01% U_3O_8 (RE). Samples taken by Picton Uranium Mines Limited gave 0.06% U_3O_8 (RE). The radioactive conglomerate was traced along the lake shore for a distance of approximately 600 hundred feet.

History of Development:

1957: A ground geophysical survey was carried out by El Pen-Rey Mines and Oils Limited.

1959: Three drill holes totalling 532 feet were drilled by Picton Uranium Mines Limited.

1970: An airborne geophysical survey was carried out by Tomrose Mines Limited and Kennco Explorations Limited.

1975: One short drill hole was drilled by M. Burton.

1976: Trenching, grological and geophysical surveys and diamond drilling was carried out by Hollinger Mines Limited.

Principal References:

Robertson, J.A.
1968: Picton-LeClerc Property; p.78 *in* Uranium and Thorium Deposits of Northern Ontario, MRC No.9, 106p.

Thomson, J.E.
1960: Picton Uranium Mines Limited; p.29-30 *in* MacLennan and Scadding Townships, ODM GR No.2, p.34. Accompanied by Map 2009. Scale 1 inch to 1/2 mile. Charts A,B,C.

OGS, AFRO, Toronto - Technical File No. 63.825, El Pen Rey Mines and Oils Limited, 1957
- Drill Log Report No. 15, Picton Uranium Mines Limited, 1959
- Technical File No. 63.210, Tomrose Mines Limited, 1970
- SMDR File No. 000409

Dominion Gulf Company Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°16'11"N Longitude 81°57'23"W
Map Reference: OGS Map 2419
May Township

Geology:

Sheared and deformed quartzite and greywacke form the host rock for radioactive quartz-pebble conglomerate.

Economic Features:

Drilling was performed on a 6 inch rusty band of conglomerate in quartzite. Assays averaged 0.07% U_3O_8 (RE).

In 1967, a single drill hole found radioactive quartzite and argillaceous material at 447.0 feet with 0.02% U_3O_8 (RE).

History of Development:

1950: Some geological exploration and sampling was completed by A. Alexander.

1954: Surfacial geological exploration and three drill holes totalling 434.1 feet were completed by Dominion Gulf Company Limited.

1967: Surfacial geological exploration and a single drill hole totalling 531.0 feet was completed by McIntrye Porcupine Mines Limited.

Principal References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie; Algoma, Manitoulin, and Sudbury Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2419, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Dominion Gulf Company Limited Occurrence; p. 79, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

OGS, AFRO, Toronto - May Township, Drill Log Report No. 12, McIntyre Porcupine Mines Limited, 1967.
- May Township, Drill Log Report No. 13, Dominion Gulf Company Limited, 1954.
- SMDR File No. 000411.

Assembly Mines Limited Occurrence (17A)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°52'37"N Longitude 80°55'59"W
Parkin Township
Map Reference: OGS Map 2361

Geology:

Radioactivity was observed in the main conglomerate bed, and in a weakly sheared bed of greywacke northeast of the nose of the fold.

Economic Features:

Assays from samples from shallow surface drilling were 0.003% U_3O_8 (RE) and 0.004% U_3O_8 (RE).

History of Development:

1953-1954: Twelve drill holes were drilled totalling 2,000 feet by Rhodes Exploration.

1957: Rhodes Exploration drilled another 249 feet.

1973: An airborne geophysical survey was completed by Gulf Minerals Canada Limited.

1974: Four drill holes totalling 1965 feet were drilled by Gulf Minerals of Canada Limited.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural REsources, Geological Compilation Series Map 2361, Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Rhodes Exploration and Finance of Canada Limited, p.80 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9, 106p.

OGS, AFRO, Toronto - Parkin Township, Drill Log Report Nos. 15 and 16 Rhodes Exploration, 1953-1954, and 1957.
- Technical File No.2.1214 Gulf Minerals of Canada Limited, 1973.
- Drill Log Report No.29, Gulf Minerals of Canada Limited 1974.
- SMDR File No. 000413.

Brewis and White Limited Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°24'58"N Longitude 81°44'19"W
Porter Township
Map Reference: OGS Map 2361

Geology:

Radioactivity is associated with conglomerates and quartzite belonging to the Huronian Supergroup.

Economic Features:

Grab samples of the conglomerate taken assayed 0.006% U_3O_8 (RE) and 0.20% (RE).

History of Development:

1954: A geological and radiometric survey was completed by Brewis and White Limited.

1955: A geological and ground radiometric survey was carried out by Agnew Lake Mines Limited.

1969: Ground and airborne geophysical surveys were carried out by Canadian Johns-Manville Company Limited.

1974: An airborne geophysical survey was completed by Consolidated Morrison Explorations Limited.

Principal References:

Card, K.D., and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Brewis and White Occurrence p.86 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - Technical File No. 63A.276, Agnew Lake Uranium Mines Limited, 1955-1956
- Technical File No. 63A 276, New Thurbois Mines, 1955-1956
- Technical File No. 63.2517, Canadian Johns-Manville Company Limited, 1969
- Technical File No. 2.1671, Consolidated Morrison Exploration Limited, 1974
- SMDR File No. 000414

Chemical Research Corporation (Canada) Limited
Occurrence

Commodity:

Uranium and Thorium

Radioactive Minerals:

Unknown

Location:

Latitude 46°22'06"N Longitude 81°42'16"W
Porter Township
Map Reference: OGS Map 2361

Geology:

Radioactive quartz-pebble conglomerate occurs adjacent to the volcanic complex and a ridge of quartzite and quartz-pebble conglomerate, that is much contorted and faulted.

Economic Features:

The radioactive conglomerate was sampled from 11 trenches at intervals of 240 feet in a direction north 55° east over a width of 12 feet. The average assay was 0.17% U_3O_8.

History ofDevelopment:

1954: Geological mapping, a scintillometer survey and trenching was carried out by Chemical Research Corporation (Canada) Limited.

1968-1969: Drilling of 8 holes totalling 1,674 feet was completed by Reactor Uranium Mines Limited.

1975: An airborne geophysical survey was completed by Consolidated Morrison Explorations Limited.

1977: Five diamond drill holes were drilled by Consolidated Morrison Explorations Limited.

1979: Name changed to Consolidated Reactor Uranium Mines Limited.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Thomson, J.E.
1960: Chemical Research Corporation (Canada) Limited; p.24-25, *in* Uranium and Thorium Deposits at the Base of the Huronian System in the District of Sudbury, ODM Geological Report No.1, 40p.

OGS, AFRO, Toronto - Technical File No.63A 200, Chemical Research Corporation (Canada) Limited, 1954.
- Porter Township, Drill Log Report No.14, Reactor Uranium Mines Limited, 1968-1969.
- Technical File No. 63.2423, Chemical Research Corporation (Canada) Limited, 1968
- Technical File No. 2.2613, D.S. Robertson and Associates Limited
- SMDR File No. 000402.

Hunter Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°22'50"N Longitude 81°41'55"W
Porter Township
Map Reference: OGS Map 2361

Geology:

Mineralization is associated with the quartz-pebble conglomerate. The bed has a maximum thickness of 7 feet. Mineralization cannot be traced for more than 200 feet over a total length of 3,100 feet.

Economic Features:

A grab sample assayed 0.50% U_3O_8 and 0.20% U_3O_8.

History of Development:

1954: A geological and geophysical survey was completed by the Chemical Research Corporation (Canada) Limited.

1961: Surface sampling was done by ODM geologist R.M. Ginn.

1966-1967: A ground geophysical survey was completed by Reactor Uranium Mines Limited.

1968-1969: A geological survey was completed by Watts, Griffis, and McQuat Limited.

1974: An airborne geophysical survey was carried out by Consolidated Morrison Explorations Limited.

1975: An airborne geophysical survey was completed by Amax Explorations.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Coblat; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: International Nickel Company Limited; p.90-81 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No. 9, 106p.

OGS, AFRO, Toronto
- Technical File No. 63A 200, Chemical Research Corporation (Canada) Limited, 1954
- Technical File No. 63.2211 Reactor Uranium Mines Limited 1966-1967
- Technical File No. 63.2211A Broulan Reef Mines Limited 1967
- Technical File No. 63.2423, Watts, Griffis, and McQuat Limited, 1968-1969
- Technical File No.2, 1671 Consolidated Morrison Explorations Limited, 1974
- Technical File No. 2.1618, Amax Explorations Limited, 1975
- SMDR File No. 000415

New Mylamaque Explorations Limited Occurrence
(Mymar)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°25'10"N Longitude 81°42'50"W
Porter Township
Map Reference: OGS Map 2361

Geology:

Radioactivity was observed along an east-west trending radioactive zone of quartz-pebble conglomerates.

Economic Features:

Grab samples from this zone assayed 0.18% U_3O_8 and 0.20% U_3O_8 (RE).

History of Development:

1954: A geological and ground geophysical survey was carried out by New Mylamaque Explorations Limited

1969: An airborne geophysical survey was completed by Canadian Johns-Manville Company Limited.

Four drill holes totalling 2,634 feet were drilled for Projex Limited.

1974: Consolidated Morrison Explorations Limited carried out an airborne geophysical survey.

Principal References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series, Map 2361. Scale 1:253,440 or 1 inch to 4 miles

Robertson, J.A.
1968: Hunter Lake Area Occurrence; p.86 in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No.9 106p.

OGS, AFRO, Toronto - Technical File No. 63.501, New Mylamaque Explorations Limited 1954
- Technical File No. 63.2517, Canadian Johns-Manville Company Limited, 1969
- Technical File No. 2.1671, Consolidated Morrison Explorations Limited 1974
- Drill Log Report No. 19, Projex Limited, G.L. Phelan, 1969
- SMDR File No. 000417

Nordic Resources Limited Prospect

Commodity:

Uranium and Thorium

Radioactive Minerals:

Uraninite

Location:

Latitude 46°54'57"N Longitude 81°06'04"W
Roberts Township
Map Reference: ODM Map 2212

Geology:

Mineralization occurs in Proterozoic argillite containing quartz-pebble conglomerate. The main showing is approximately 90 metres by 460 metres.

Economic Features:

According to assays performed by Amax Exploration Incorporated, the area of the main showing has a grade potential of 0.025% U_3O_8. The best drill intersection by Amax assayed 0.06% U_3O_8 0.02% ThO_2, over 1.4m of core.

History of Development:

1975: Geological mapping and a radiometric survey was carried out by E.A. Rose.

1976: Erana Mines Limited carried out geological and radiometric surveys.

TX Resources Limited completed a geological survey.

Principal References:

Meyn, H.D.
1971: Geology of Roberts Creelman, and Fraleck Townships, District of Sudbury, Ontario Dept. of Mines and Northern Affairs, Geological Report 91, 48p. Accompanied by map 2212, scale 1:31,680 or 1 inch to 1/2 mile.

Thomson, J.E.
  1960: Uranium and Thorium Deposits at the Base of the Huronian System in the District of Sudbury; Ontario Department of Mines, Geological Report No.1, 40p. Accompanied by charts A through K.

OGS, AFRO, Toronto - Technical File No. 2.1605, Amax Exploration Company Limited, 1974
- MDIR File No. S0087

Roberts Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°57'55"N Longitude 81°06'12"W
Roberts Township
Map Reference: ODM Map 2212

Geology:

Sedimentary formations of quartzites, greywackes, arkoses and pebble to boulder conglomerates are present. Scattered conglomerate horizons are found within the quartzites. These horizons consist of some granitic pebble material in a quartzite matrix.

Economic Features:

Several drill holes were drilled in the Huronian sediments. Readings were 0.010 Mr/Hr. Other assays were 0.001% U_3O_8 (RE) and 0.006% U_3O_8 (RE).

History of Development:

1954: A geological survey was completed by Dyno Mines Limited.

1954-1955: A geological survey and surface sampling was carried out by Elmridge Mines Limited.

1966-1973: H.C. Humphries and Assembly Mines Limited drilled 42 drill holes totalling 10,584 feet.

1973: An airborne geophysical survey was carried out by Gulf Minerals Limited.

Principal References:

Meyn, H.D.
1971: Roberts Lake; p.36-38 *in* Geology of Roberts, Creelman, and Fraleck Townships, District of Sudbury, ODM, GR 91, 48p. Accompanied by Maps 2212, Scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto
- Technical File No. 63A229, Elmridge Mines Limited, 1954
- Technical File No. 63A204, Dyno Mines Limited, 1954.
- Roberts Township, Drill Log Report No.14 and 16, Assembly Mines Limited, 1966-68.
- Roberts Township, Drill Log Report No.15 and 20, H.C. Humphries, 1967-73.
- Technical File No. 2.1214, Gulf Minerals Limited, 1973.
- SMDR File No. 001104.

A. Alexander Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46° 17' 02" N Longitude 81° 56' 31" W
Shakespeare Township
Map Reference: ODM Map 2313

Geology:

The Early Precambrian granitic basement is in contact with Huronian sediments. Adjacent to the contact zone, an exposure shows a 15 foot width of radioactive quartz-pebble conglomerate.

Economic Features:

Samples from the main cinglomerate bed assayed 0.13% U_3O_8.

History of Development:

1968-1969: A geological and geophysical ground survey and several drill holes were completed by Aggressive Mining Company Limited.

1969: A geological and ground geophysical survey, and two drill holes totalling 1,337 feet were completed by Moncreiff Uranium Mines Limited.

1976: Kerr Addison Mines Limited performed geophysical and geological surveys.

Principal References:

Card,K.D. and Palonen, P.
1976: A. Alexander Occurrence; p. 43, in Geology of the Dunlop-Shakespeare Area, Disrtict of Sudbury, ODM Geoscience Report 139, 52 p. Accompanied by Map 2313 scale 1:31,680 or 1 inch to ½ mile.

OGS, AFRO, Toronto
- Shakespeare Township, Drill Log Report No.14, Moncrieff Uranium Mines Limited, 1969.
- Technical File No. 2.2294, Kerr Addisson Mines Limited 1976
- SMDR File No. 001103.

Broulan Reef Mines Limited
(Sutherland Creek Occurrence)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°22'27"N Longitude 81°48'58"W
Shakespeare Township
Map Reference: ODM Map 2313

Geology:

Radioactivity was found in oligomictic quartz-pebble lenses in the Matinenda Formation, ranging in thickness from a few inches to 3 feet.

Economic Features:

The average assay was 0.02% U_3O_8.

History of Development:

1947: Two drill holes totalling 3,416 feet were drilled by Falconbridge Nickel Mines Limited.

1953-54: A geological survey was completed by Dominion Gulf Company.

1954: A geologicaland ground geophysical survey was completed by Dominion Gulf Company.

1968: A geophysical survey was completed by Broulan Reef Mines Limited.

1968-69: An airborne geophysical survey was completed by Broulan Reef Mines Limited.

Eighteen diamond drill holes totalling 13,086 feet were drilled by Broulan Reef Mines Limited.

Two drill holes totalling 1,294 feet were drilled by Broulan Reef Mines Limited.

1969-70: A single drill hole to 2,070 feet was drilled by Broulan Reef Mines Limited.

Principal References:

Card, K.D. and Palonen, P.
1974: Broulan Reef Mines Limited near Sutherland Creek; p.45, *in* Geology of the Dunlop-Shakespeare Area, District of Sudbury, Ontario Division of Mines, Geoscience Report No.139, 52p. Accompanied by Map 2313, scale 1 inch to 1/2 mile (1:31,680)

OGS, AFRO, Toronto - Shakespeare Township, Drill Log Report No.17 Falconbridge Nickel Mines Limited, 1947
- Shakespeare Township, Drill Log Report No.'s 10,11,16, Broulan Reef Mines Limited 1968-70
- Technical File No. 63A203, Dominion Gulf Company, 1954
- Technical File No. 63.502, Dominion Gulf Company, 1954
- Technical File No. 63.2211, Broulan Reef Mines Limited, 1968
- SMDR File No. 001102

Dominion Gulf Company Limited Occurrence

Commodity:

Uranium and Thorium

Radioactive Minerals:

Pitchblende, brannerite, and thucolite

Location:

Latitude 45°20'48"N Longitude 81°50'45"W
Shakespeare Township
Map Reference: ODM Map 2313

Geology:

The sediments here consist of quartzite with local interbeds of quartz-pebble conglomerate and are intruded by large and small bodies of diabase diorite and gabbro.

Five zones of radioactivity were located in the sediments, four of these in quartz-pebble conglomerate beds associated with quartzites.

Economic Features:

The two most important zones occur on the south shore of Agnew Lake. Both are exposed occassionally over strike lengths of 150 to 200 feet. Assays recorded were up to 0.054% U_3O_8 and 0.9% ThO_2 over widths of 8 inches to 2 feet. In the other areas, radioactivity was up to 0.03% U_3O_8 and 0.05% ThO_2. (Resident Geologists Files, Sudbury)

History of Development:

1954: Geological and ground surveys were completed by Dominion Gulf Company Limited.

1961: Two drill holes totalling 720 feet were drilled by Falconbridge Nickel Mines Limited.

1968: A ground geophysical survey was completed by Broulan Reef Mines Limited.

1974: An airborne geophysical survey was completed by Consolidated Morrison Explorations Limited.

Principal References:

Card, K.D., Palonen, P.,
1976: Dominion Gulf Company Limited; p.44, in Geology of the Dunlop-Shakespeare Area, District of Sudbury, Geoscience Report No.139, Accompanied by Map 2313, scale 1 inch to 1/2 mile (1:31,680)

OGS, AFRO, Toronto - Shakespeare Township
- Technical File No. 63.203, Dominion Gulf Company Limited, 1954.
- Technical File No. 63.502, Dominion Gulf Company Limited, 1954-1955.
- Technical File No. 63.2211, Broulan Reef Mines Limited, 1968.
- Technical File No. 22339, Pick Mines Limited, 1969.
- Technical File No. 2.1671, Consolidated Morrison Exploration Limited, 1974
- SMDR File No. 000423.

McDonald Bay Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 46°20'48"N Longitude 81°50'06"W
Shakespeare Township
Map Reference: ODM Map 2313

Geology:

The most important discovery was found on the North 1/2 of Lot 2, Concession lV. It consists of several parallel conglomerate beds that strike northeast and dip north 70 degrees west. Diamond drilling revealed quartz-pebble conglomerate lenses within the sections of interbedded arkose, pelite, volcanic, and conglomerate.

Economic Features:

Assays ranged from traces to 0.14% U_3O_8 (RE) over a width of 1 to 3 feet. Other assays averaged 0.10% U_3O_8 across 2.0 feet.

History of Development:

1953-1954: Geological and geophysical surveys were completed by Shakespeare Uranium Mines Limited.

1954: Thirty-one drill holes totalling 7,294 feet were drilled by Shakespeare Uranium Mines Limited.

Principal References:

Card, K.D., Palonen, P.A.
1976: Shakespeare Uranium Mines Limited; p.45-46 in Geology of the Dunlop Shakespeare Area, District of Sudbury, Ontario Division of Mines, Geoscience Report No.139, 52p. accompanied by Map 2313, scale 1 inch to 1/2 mile (1:31,680)

OGS, AFRO, Toronto - Technical File No. 63A 518, Shakespeare Uranium Mines Limited, 1954.
- Shakespeare Township, Drill Log Report No.18 Shakespeare Uranium Mines Limited, 1954-55
- SMDR File No. 000425

Jonsmith Mines Limited Occurrence
(McKinnon)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47°45'27"N Longitude 81°35'38"W
Stetham Township
Map Reference: OGS Map 2361

Geology:

Granitic rocks with partially assimilated inclusions of mafic volcanics are cut by northwest and northeast trending diabase dykes and late northwest trending faults.

Radioactivity was found in pegmatitic and mafic rocks on the surface.

Drilling was concentrated on the southern shore of the west arm of Kenetogami Lake.

It was determined that radioactivity occurs with widespread carbonization and the introduction of brown hematite into the mafic rocks.

Economic Features:

Two diamond drill hole intersections returned assays of 0.6 pounds per ton U_3O_8 over 30 feet and 1.6 pounds per ton U_3O_8 over 16.8 feet. (Northern Miner, Sept. 9, 1976, p.22)

History of Development:

1967: Ground geophysical and geological surveys, prospecting, pitting and grab sampling was carried out by Jonsmith Mines Limited.

1968: Pitting, trenching and 14 diamond drill holes totalling 5,303 feet were completed by Jonsmith Mines Limited.

1970: Pitting and diamond drilling was carried out by Jonsmith Mines Limited.

1976: An airborne radiometric survey was carried out by Beach Gold Mines Limited.

1977: Five diamond drill holes totalling 1,973 feet were drilled by Beach Gold Mines Limited.

Economic Features:

In 1977 Beach Gold Mines Limited drilled 5 diamond drill holes and outlined the "A" Zone. This zone extends for 1,600 feet.

The average assay is 1.33 pounds per ton U_3O_8.

Ground radiometric surveys have indicated two new zones. The "B" Zone 1,100 feet west of the A Zone has an indicated length of 1,000 feet and is open to the north.

The "C" Zone about onehalf a mile west of the B Zone is approximately 1,400 feet long and open to the north. (The Northern Miner, May 15, 1977, Vol.63, No.9, p.5)

Principal References:

Card, K.D. And Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Jonsmith Mines Limited; p.83-84 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9, 106p.

The Northern Miner, Beach Gold Test Zone A on "U" Prospect in The Northern Miner, Vol.63,No.9, May 12, 1977. p.5, published by the Northern Miner News.

OGS, AFRO, Toronto - Technical File No. 63.3283, Jonsmith Uranium Mines Limited, 1967.
- Technical File No. 63.3279, Jonsmith Uranium Mines Limited, 1968.
- Stetham Township, Drill Log Report No.11,12,13 Jonsmith Uranium Mines Limited 1968-1970
- SMDR File No. 000426

Stobie Township Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 47°01'48"N Longitude 80°46'33"W
Stobie Township
Map Reference: ODM Map 2238

Geology:

Uranium mineralization is present in the Matinenda sediments interbedded in sheared, rusty, argillaceous schist. Mineralization can also be found in an angular quartz conglomerate with a quartz greywacke matrix.

Economic Features:

An assay of the sheared argillite showed 0.08% U_3O_8. Analysis of the conglomerate matrix showed 0.021% U_3O_8 was present.

History of Development:

1967: Geophysical and geological surveys were carried out by Canadian Johns-Manville Company Limited.

1976: Stripping, trenching and assaying was completed by J.A. Pollock.

1977: Two drill holes totalling 628 feet were completed by the Grandad-Warren-Consolidated Professor joint Option.

Further trenching was carried out by J.A. Pollock.

Principal References:

Meyn, H.D.
1972: General Geology of Grigg and Stobie Townships; p.32 in Geology of Grigg and Stobie Townships, District of Sudbury, Ontario Department of Mines and Northern Affairs, Geological Report 100, 38p. Accompanied by Map 2238, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto
- Technical File No. 63A,548, Canadian Johns-Manville Company Limited, 1969
- Technical File No. 63.2277, Canadian Johns-Manville Company Limited 1967
- Stobie Township, Drill Log Report No. 10, Grandad-Warren Consolidated Professor, 1977
- SMDR File No. 000174

Harrison Minerals Occurrence

Commodity:

Uranium, thorium, and zirconium

Radioactive Minerals:

Unknown

Location:

Latitude 47°05'13"N Longitude 80°34'41"W
Turner Township
Map Reference: ODM Map 2260

Geology:

A quartz-pebble conglomerate lies on basement rocks and is overlain by argillite, quartz-pebbles (with pyrite) conglomerate, green quartzite, and greywacke.

The radioactive bed of pyritic "microconglomerate" is approximately 30 feet thick. They are folded and dips range from 25 to 70 degrees north, east and south.

Economic Features:

Assays from the conglomerate ranged from 0.001% to 0.27% U_3O_8.

History of Development:

1953-54: Discovered by T. Saville and staked by Normingo Mines Limited.

1954: Surface clearing, a geophysical survey, and three drill holes were completed by Harrison Minerals.

1954-55: A geological and radioactivity survey and 9 diamond drill holes totalling 1,579 feet were drilled by H. Hibbert Mines Limited.

1967: Three drill totalling 3,043 feet were drilled by Canadian Johns-Manville Company Limited.

1968-1969: An airborne geophysical survey was carried out by MacRae Mining Corporation for Henry Last and Associates.

1971: Nine drill holes were drilled by Canadian Johns-Manville Company Limited totalling 1,540 feet.

1976: Six diamond drill holes were drilled by Aggressive Mining Company Limited.

1978: Aggressive Mining Company Limited completed a scintillometer survey.

Principal References:

Card, K.D. et al
1973: Canadian Johns-Manville; p.110-118 in Geology of the Maple Mountain Area, District of Timiskaming, Nipissing, and Sudbury, ODM Geological Report No. 106, 133p. Accompanied by Maps 2256, 2257, 2258, and 2259, scale 1 inch to 1 mile. Map 2260, scale 1 inch to ½ mile.

OGS, AFRO, Toronto
- Turner Township, Drill Log Report No.10 H. Hibbert Mines Limited, 1954
- Drill Log Reports Nos.12,13, and 15 Canadian Johns-Manville Company Limited, 1967 and 1971
- Technical File No. 63.2275, Canadian Johns-Manville Company Limited, 1968-69.
- Technical File No. 63.2542, MacRae Mining Corporation Limited, 1969
- Drill Log Report No.17, MacRae Mining Corporation Limited, 1969
- Technical File No. 2.2715, Aggressive Mining Company Limited, 1978
- Technical File No. 2.2242 Aggressive Mining Company Limited, 1976
- SMDR File No. 000427

Name and Location:

Dominion Gulf Company Limited
Latitude 46° 21' 21" N Longitude 81° 42' 50" W
Baldwin Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin Districts; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Technical File No. 63A.254, Dominion Gulf Company, 1955.
- Technical File No. 63.1049, Evenlode Gold Mines Limited, 1960.
- SMDR File No. 000382.

Thomson, J.E.
1952: Geology of the Baldwin Township *in* ODM Annual Report Vol. 61, part 4.

OMNR, Regional Geologist Files, Sudbury, S63.26.

Name and Location:

United Cobalt Mines Limited
Latitude 46° 20' 06" N Longitude 81° 47' 56" N
Baldwin Township

References:

Northern Miner 1967, United Cobalt Mines Limited in Canadian Mines Handbook 1972-73, p. 379.

Robertson, J.A.
1968: Rowan Consolidated Mines Limited and United Cobalt Mines Limited; p.85, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Baldwin Township, Drill Log Report No. 35, United Cobalt Mines Limited, 1956.
- Baldwin Township, Drill Log Report No. 27, Rowan Consolidated Mines Limited, 1967.
- SMDR File No. 000387.

Remarks:

Two parallel beds of radioactive quartz-pebble conglomerate approximately 175 feet apart have been traced intermittently in a north-easterly direction for 1.5 miles.
Extensive drilling by United Cobalt Mines Limited established the presence of low radioactivity. No assays were available.

Name and Location:

French River (South Side of Main Channel)
Bigwood Township
Latitude 46° 10' 12" N Longitude 80° 13' 01" W

References:

Lumbers, S.B.
1975: Geology of the Burwash Area, Districts of Sudbury, Nipissing, and Parry Sound; Ontario Division of Mines, Geological Report No. 116, 158p. Accompanied by Map 2271, scale 1 inch to 2 miles.

Remarks:

Crystals and seams of allanite occur with abundant red alkalic feldspar in an intensely hematized pegmatite dike.

Name and Location:

Aubinadong River
Latitude 47° 15' 51" N Longitude 83° 18' 20" W
Cassidy Township

References:

Thurston, P.C., Siragusa, G.M., and Sage, R.P.
1977: Geology of the Chapleau Area, District of Algoma, Sudbury, and Cochrane; ODM, Geological Report No. 157, 293p. Accompanied by Maps 2351 and 2352, scale 1:250,000. Map 2221, scale 1:253,440 or 1 inch to 4 miles.

Remarks:

This occurrence is situated in a cliff face on the east side of the Aubinadong River. A. Zeemel of the Gunmar Mining Limited, described the occurrence as pitchblende occurring as fracture fillings 3/8 to 1/2 inch wide and striking northeast. The granite is pink medium-grained rock exhibiting some yellow secondary uranium oxides along tiny fractures close to the main pitchblende-bearing fractures.

Name and Location:

Noranda Mines Limited (Marcia Lake)
Latitude 47° 02' 15" N Longitude 80° 29' 46" W
Clary Township

References:

Card, K.D., McIlwaine, W.H., and Meyn, H.D.
1973: Noranda Exploration Comapny; p.115, in Geology of the Maple Mountain Area, District of Timiskaming, Nipissing, and Sudbury; ODM, Geological Report No. 106, 133p. Accompanied by Maps 2256, 2257, 2258, and 2259, scale 1 inch to 1 mile. Map 2260, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Clary Township, Drill Log Report No. 10, Noranda Explorations Limited, 1967.
- Technical File No. 63.2524, MacRae Mining Corporation Limited, 1969.
- SMDR File No. 0000393.

Remarks:

The host rocks for radioactive pebble-conglomerates are argillites and greywackes.

Name and Location:

Nemegosenda Lake
Latitude 48° 00' 20" N Longitude 83° 06' 30" W
Collins and Chewitt Township

References:

Parsons, G.E.
1961: Niobium-bearing Complexes East of Lake Superior, Ont. Dept. Mines, Geological Report No. 3, 73 p. Accompanied by Map 2006, scale 1 inch to ¼ mile.

Thurston, P.C., Siraguse, G.M., and Sage, R.P.
1977: Geology of the Chapleau Area, District of Algoma, Sudbury, and Cochrane,; Ontario Division of Mines, Geological Report No. 57, 293 p. Accompanied by Maps 2351 and 2352, scale 1:250,000 and Map 2221, scale 1 inch to 4 miles.

OGS, AFRO, Toronto - Chewitt Township, Drill Log Report No. 10, Dominion Gulf Company Limited, 1955-1956.
- SMDR File No. 001108.

Remarks:

The complex is composed of incomplete rings of various alkalic syenites intruded into a sequence of tonalitic and monzonitic rocks of the Shawmere anorthosite complex. Parson (1961) indicated that three fenite zones occur from the outer perimeter inward: ijolite fenite; red alkalic fenite and pyroxenitic fenite. The red alkalic fenite is consistently radioactive. Uranium assays were in the range of 0.02 to 0.03% U_3O_8.

Name and Location:

North Creelman
Latitude 46° 57' 21" N Longitude 81° 04' 13" W
Creelman Township

References:

Meyn, H.D.
1971: North Creelman Location; p. 39, in Geology of Roberts, Creelman, and Fraleck Townships, District of Sudbury, Ontario Ministry of Mines and Northern Affairs, Geological Report No. 91, 48 p.

OGS, AFRO, Toronto - MDIR File No. S0086.

Remarks:

Uranium mineralization occurs in greywacke and pebble-conglomerate of the Nississagi Formation. Drilling intersected a radioactive zone. A grab sample taken by H.D. Meyn assayed 0.003% U_3O_8.

Name and Location:

J.R. Bridges
Latitude 46° 09' 00" N Longitude 81° 34' 45" W
Curtin Township

References:

Card, K.D.
1975: Mongowin and Curtin Townships, District of Sudbury; Ontario Division of Mines, Geological Map 2312, scale 1 inch to ½ mile.

Robertson, J.A.
1968: J. R. Bridges; p.85, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Remarks:

A radioactive occurrence was discovered at Howrey Creek, 12 miles southeast of Espanola, in polymictic conglomerates of the Gowganda Formation.

Name and Location:

Noranda Exploration Company Limited (Yorston Lake)
Latitude 47° 02' 27" N Longitude 80° 35' 15" W
Demorest Township

References:

Card, K.D. and Lumbers, S.B.
1975: Sudbury-Cobalt, Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Demorest Township, Drill Log Report No.10, Noranda Exploration Company Limited, 1967.
- Techncial File No. 63.2277, Canadian-Johns Manville Comapny Limited, 1967-1968.
- Technical File No. 63.2542, MacRae Mining Corporation Limited, 1969.
- SMDR File No. 000313.

Remarks:

Radioactivity is associated with quartz-pebble conglomerate interbedded in quartzite.

Name and Location:

Alford Exploration Limited
Latitude 46° 25' 16" N Longitude 81° 32' 59" W
Drury Township

References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Alford Explorations Limited Occurrence; p. 71, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106 p.

Remarks:

A band of conglomerate, arkose and quartzite of the Mississagi Formation lies across the property. This is bounded to the north by granite and sedimentary rocks wich are intruded by gabbro. A few radioactive pyritic quartz-pebble bands occur. Radioactivity is highest in the 6 inch bands. Assays range from 0.02% U_3O_8 over 20 feet to 0.24% U_3O_8 and 0.30% ThO_2 over 2.0 feet.
Radioactive minerals present are monozite, brannerite, and uraninite.

Name and Location:

Ingamar Exploration Limited
Latitude 46° 57' 32" N Longitude 80° 51' 36" W
Fraleck Township

References:

Meyn, H.D.
1971: Mississagi Formation; p.8-13, in Geology of Roberts, Creelman, and Fraleck Townships, ODM, Geological Report No. 91. Accompanied by Map 2212, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Techncial File No. 63.2277, Canadian Johns-Manville Company Limited, 1967.
- Technical File No. 2.2307, M. LeFort 1976.
- Fraleck Township, Drill Log Report No. 10, Canadian Johns-Manville Company Limited,
- SMDR File No. 001142.

Remarks:

Locally the radioactive zones are located in the quartzite and quartz-pebble conglomerate of the Mississagi Formation of the Bruce Group.

Name and Location:

Borden Lake
Latitude 47° 48' 55" N Longitude 83° 18' 55" W
Gallagher Township

References:

Thurston, P.C., Siragusa, G.M., and Sage, R.P.
1977: Borden Lake Area; p.261, in Geology of the Chapleau Area, District of Algoma, Sudbury, and Cochrane; ODM, Geological Report No. 157, 293p. Accompanied by Maps 2351 and 2352, scale 1:250,000. Map 2221, scale 1:253,400 or 1 inch to 4 miles.

OGS, AFRO, Toronto - SMDR File No. 0000395.

Remarks:

Radioactivity associated with granitic rocks which are gneissic and massive are 4 to 5 times the background. The rocks strike S 33° E and dip 10° N. The radioactivity seems to be due to thorium.

Name and Location:

J. Gutcher
Latitude 46° 08' 15" N Longitude 82° 02' 25" W
Harrow Township

References:

Giblin, P.E. and Leahy, E.J.
1979: Sault Ste. Marie-Elliot Lake, Algoma, Sudbury, and Manitoulin; Ontario Ministry of Natural Resources, Geological Compilation Map 2419, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Harrow Township, Drill Log Report No. 12, 1954.

Remarks:

Radioactivity is associated with dikes in Quartzite. Assays recorded were 0.02% U_3O_8 over 3 feet and 0.04% over 5.2 feet.

Name and Location:

V. Stencill
Latitude 46°08'21"N Longitude 82°01'20"W
Harrow Township

Remarks:

Radioactivity is associated with a dyke in quartzite.

The following assays were obtained from three holes; 0.04% U_3O_8 over 5.2 feet, 0.06% U_3O_8 over 5.5 feet and 0.02% U_3O_8 over 3.0 feet (Assessment Files, Sudbury)

References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Harrow Township, Drill Log Report No.11
V. Stencill, 1954

OMNR Sudbury Regional Geologists Files.

Name and Location:

Richore Gold Mines Limited
Latitude 46° 25' 02" N Longitude 81° 39' 10" W
Hyman Township

References:

OGS, AFRO, Toronto
- Technical File No. 63.2176, East Bay Gold Mines Limited, 1967.
- Hyman Township, Drill Log Report No. 16, Richore Gold Mines Limited,1969.
- Technical File No. 2.50, Richore Gold Mines Limited.
- Technical File No. 2.2112, E.A. Rose, 1976.
- Technical File No. 2.1996, E.A. Rose, 1975
- Technical File No. 2.1800, E.A. Rose, 1975.
- Technical File No. 2.1671, Consolidated Morrison Explroations Limited.
- Technical File No. 63A.200, Chemical Research Corporation Limited.

Mineral Development Sector, Department of Energy, Mines and Resources, Ottawa, National Mineral Inventory, File U 14, 41/I/5, Richore, June 1971.

Remarks:

This occurrence is underlain by the Birch Lake granite batholith and by metasediments. There are a series of northeasterly trending major faults. Three zones of radioactivity were detected in the underlying intrusive formations and in the vertical standing fracture zones in the granite batholith.

Shallow diamond drilling revealed 10 radioactive zones. The best assays were 0.08 and 0.12 pounds per ton U_3O_8.

Name and Location:

K. Kram and J. Glowaski
Latitude 47°22'10"N Longitude 83°13'45"W
Langois Township

Remarks:

A band of highly folded Keewatin greywackes strikes northeast. The greywackes are cut by quartz veins which carry pyrite, pyrrhotite, and shalerite.

Seven samples gave assays up to 0.09% U_3O_8 (RE).

References:

Robertson, J.A.
1968: K. Kram and J. Glowaski p. 84-85 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9, 106p.

Thurston, P.C., Siragusa, G.M., Sage, R.P.
Geology of the Chapleau Area, District of Algoma, Sudbury and Cochrane, Ontario Div. Mines, GR 157, 293 p., Accompanied by Maps 2351 and 2352 scale 1:250,000 and Map 2221, scale 1 inch to 4 miles (1:253,440).

OGS, AFRO, Toronto - SMDR File No. 000429

Name and Location:

E. Chevrette
Latitude 46° 39' 13" N Longitude 80° 44' 45" W
Maclennan Township

References:

Card, K.D. and Lumbers, S.B.
1975: Sudbury-Cobalt, Districts of Cochrane, Sudbury, and Timiskaming; Ontario Division of Mines, Geological Compilation Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: E. Chevrette Occurrence; p.85, in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63.210, Tomrose Mines Limited, 1970.
- SMDR File No. 000407.

Remarks:

Radioactivity occurred in granites. Grab samples collected by M. E. Chevrette averaged 0.08% U_3O_8.

In 1970 an airborne geophysical survey was completed by Tomrose Mines Limited and Kennco Exploration Limited.

Name and Location:

Massey Bay
Maclennan Township
Latitude 46°39'25"N Longitude 80°46'09"W

References:

Robertson, J.A.
1968: Massey Bay Occurrence; p.86 in Uranium and Thorium Deposits of Northern Ontario, ODM MRC No.9, 106p.

Thomson, J.E.
1961: Maclennan Township; p.28 in Maclennan and Sladding Townships, Ontario Department of Mines, Geological Report No.2, 34p. Accompanied by Map 2009. Scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Maclennan Township, Drill Log Report No.16 Nalgar Nickel Mines, Limited, 1957
- Drill Log Report No.18 Pah Canadian Development Company Limited, 1961
- Drill Log Report No.19, International Nickel Company of Canada Limited, 1967-68.
- Technical File No. 63.210, Tomrose Mines Limited, 1970
- SMDR File No. 00408

Remarks:

Radioactivity was encountered in quartz-pebble conglomerates along the west shore of Massey Bay. They lie with great angular unconformity on Pre-Huronian greywacke. Quartz-pebble conglomerate and quartzite are pyritic and weakly radioactive. The only assay showed 0.009 % U_3O_8 (RE).

Name and Location:

Canadian Johns-Manville Company Limited
Latitude 47° 05' 43" N Longitude 80° 43' 57"W
Marconi Township

References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Sudbury, Nipissing, Parry Sound, and Timiskaming Districts; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Card, K.D., McIlwaine, W.H., and Meyn, H.D.
1973: Canadian Johns-Manville Company Limited; p. 110-118, in Geology of Maple Mountain, District of Timiskaming, Nipissing, and Sudbury, Ont. Div. Mines, Geological Report No. 106, 136 p. Accompanied by Maps 2256,2257, 2258, and 2259, scale 1 inch to 1 mile. Map 2260 scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Technical File No. 63.2277, Canadian Johns-Manville Company Limited, 1967-1968.
- SMDR File No. 000386.

Remarks:

The contact between the Superior and Southern Structural Provinc occurs in Marconi Township.
Diamond drilling showed that there are two separate radioactive occurrences in two different settings. The southwestern occurrence is found in pegmatite dikes. The northeastern occurrence is found in quartz-pebble conglomerate.

Name and Location:

Can-Fer Mines Limited
Latitude 47° 06' 07" N Longitude 80° 46' 26" W
Marconi Township

References:

Card, K.D., McIlwaine, W.H., and Meyn, H.D.
1973: Can-Fer MInes Limited; p. 114, in Geology of the Maple Mountain Area, Districts of Timiskaming, Nipissing, and Sudbury; Ontario Div. Mines, Geological Report No. 106, 132p. Accompanied by Maps 2256, 2257, 2258, and 2259, scale 1 inch to 1 mile. Map 2270, scale 1 inch to ½ mile.

Robertson, J.A.
1968: Can-Fer Mines Limited; p. 78, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No. 9, 106p.

OGS, AFRO, Toronto - Techncial File No. 63.2277, Canadian Johns-Manville Company Limited, 1969.
- SMDR File No. 000410.

Remarks:

Uranium mineralization was found in pegmatite dikes along the eastern shore of an unnamed lake near the centre of Marconi Township.
Assays of sample taken from them were 0.8 pounds per ton U_3O_8.

Name and Location:

T. D. Saville
Latitude 46° 46' 50" N Longitude 80° 18' 40" W
McNish Township

References:

Dressler, B.O.
1979: Th. D. Saville; p. 81-82, in Geology of McNish and Janes Townships, District of Sudbury; Ontario Geological Survey, Report 191,91 p. Accompanied by Map 2425, scale 1:31,680 or 1 inch to ½ mile.

Remarks:

Uranium occurs in a pyritiferous quartz-pebble conglomerate of the Mississagi Formation.

Name and Location:

Hollinger Mines Limited
Moncrieff Township
Latitude 46°46'14N Longitude 81°36'12"W

Remarks:

Most of the radioactivity was confined to the Lorrain Formation.

References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361. Scale 1:253,440 or 1 inch to 4 miles

OGS, AFRO, Toronto
- Moncrieff Township, Drill Log Report No.11 Nickel Rim Mines Limited
- Moncrieff Township, Drill Log Report No.15 Hollinger Mines Limited, 1976
- Technical File No. 2.2272, Hollinger Mines Limited, 1977
- Technical File No. 2.2484, Hollinger Mines Limited, 1978
- SMDR File No. 001139.

Name and Location:

Deauville Exploration Limited
Latitude 46° 16' 52" N Longitude 81° 37' 23" W
Nairn Township

References:

Card, K.D. and Lumbers, S.B.
1975: Sudbury-Cobalt, Districts of Cochrane, Sudbury, and Timiskaming; Ontario Division of Mines, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto - Nairn Townhsip, Drill Log Report No. 14, Deauville Explorations Limited, 1968.
- Technical File No. 63.2200, Deauville Explorations Limited, 1967.
- MDIR File No. S0128.

Remarks:

Mineralization occurs in quartzite. The radioactive zone is 45 metres wide. The best drill hole intersection was 0.05% U_3O_8 and 0.03% ThO_2 over 1.5 metres.

Name and Location:

MacFie Explorations Limited
Latitude 46° 22' 06" N Longitude 81° 49' 02" W
Porter Township.

References:

Robertson, J.A.
1968: Hunter Lake Group; p.86, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

OGS, AFRO, Toronto - Porter Townhsip, Drill Log Report No. 10, Mid-North Engineering Services Limited, 1955.
- Technical File No. 63.499, Gardiner, Low, and Morrow, 1954.
- SMDR File No. 000416.

Remarks:

A ground geolgical survey was completed along a faulted contact between quartz-pebble conglomerates and feldspathic quartzite. It was a zone some 3,000 feet long and 200 feet wide.

In 1954 geological and geophysical surveys were completed by MacFie Explorations Limited.
In 1955 4 drill holes totalling 1,104 feet were drilled by Mid-North Engineering Services Limited.

Name and Location:

Pennebec Mining Corporation
Latitude 46° 26' 07" N Longitude 81° 41' 59" W
Porter Township

References:

Card, K.D. and Lumbers, S.B.
1974: Sudbury-Cobalt; Algoma, Manitoulin, Nipissing, Parry Sound, Sudbury, and Timiskaming District; Ontario Ministry of Natural Resources, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Pennebec Mining Corporation; p. 86, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC, No. 9, 106 p.

OGS, AFRO, Toronto
- Porter Township, Technical File No. 63A.276. Agnew Lake Mines Limited and New Thurbois Mines Limited, 1955.
- Porter Township, Drill Log Report No. 13, Pennebec Mining Company Limited, 1966.
- Technical File No. 2.1671, Consolidated Morrison Explorations Limited, 1974.

Remarks:

A radioactive zone was located in the conglomerates interbedded with quartzites. The conglomerate beds as a result of faulting occur in lenses and patches and cannot be traced for more than 100 feet.

Name and Location:

Wadge Mines Limited
Latitude 46° 22' 00" N Longitude 81° 41' 32" W
Porter Township

References:

Card, K.D. and Lumbers, S.B.
1975: Sudbury-Cobalt, Algoms, Sudbury, and Timiskaming Districts; Ontario Division of Mines, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to ¼ mile.

Robertson, J.A.
1968: Hunter Lake Area; p. 86, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - Technical File No. 63.500, Wadge Mines Limited, 1954.
- Porter Township, Drill Log Report Nos. 15 and 16, Hanover Explorations Limited.

Remarks:

There occurs a small area of anomalous radioactivity in rusty,weathered conglomerate close to its contact with the Mississagi quartzite and a large strike fault.

Name and Location

Denison Mines Limited
Latitude 47° 04' 34" N Longitude 80° 33' 03" W
Seagram Township

References:

Card, K.D., McIlwaine, W.H., and Meyn, H.D.
1973: Denison Mines Limited; p. 110-118, in Geology of the Maple Mountain Area, Districts of Timiskaming, Nipissing, and Sudbury; Ontario Division of Mines, Geological Report No. 106, 160 p. Accompanied by Maps 2256, 2257, 2258, and 2259, scale 1 inch to 1 mile. Map 2260, scale 1 inch to ½ mile.

Remarks:

In 1969 a six foot dike was intersected at 180 feet. It contained quartzite, argillite, conglomeritic quartzite, and radioactive quartz-pebble conglomerate.
In 1967 Canadian Johns-Manville Company Limited carried out a geophysical survey.
In 1968 and 1969 Denison Mines Limited drilled three diamond drill holes totalling 5,170 feet.

Name and Location:

P.G. Blue
Latitude 46°17'30"N Longitude 81°51'45"W
Shakespeare Township

Remarks:

According to ODM geologic map 2361, Sudbury-Cobalt Area, this occurrence is situated near the contact of the Salmay Lake Formation and the Matinenda Formation.

Radioactivity was found to average 0.003% U_3O_8(RE).

Reference:

Card, K.D., and Palonen, P.A.
1976: Geology of the Dunlop-Shakespeare Area, District of Sudbury; Ontario Division of Mines, Geoscience Report 139, 52 P. Accompanied by Map 2313, scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Technical File No. 23718, P.G. Blue, 1981

Name and Location:

Delcan Minerals Limited
Latitude 46°16'59"N Longitude 81°52'42"W
Shakespeare Township

References:

Card, K.D., and Palonen, P.A.
1976: Delcan Occurrence; p.42 in Geology of the Dunlop-Shakespeare Area, District of Sudbury, Ontario Division of Mines, Geoscience Report 139, 52p. Accompanied by Map 2313 Scale 1 inch to 1/2 mile.

OGS, AFRO, Toronto - SMDR File No. 000422

Remarks:

Interbedded Sandstone and pelite of the Matinenda Formation are exposed in lots 8 and 9, concession I, Shakespeare Township.

In 1956 and 1957, Delcan Minerals Limited diamond drilled four holes, three of which totalled 1,297 feet in lots 8 and 9 Shakespeare Township. In one diamond-drill hole, an assay of 0.63% U_3O_8 over a length of 1.5 feet of pyritic sandstone was obtained.

Name and Location:

Pick Uranium Mines Limited
Latitude 46° 21' 29" N Longitude 81° 52' 44" W
Shakespeare Township

References:

Card, K.D. and Palonen, P.H.
1976: Uranium Occurrence;p.44, in Geology of the Dunlop-Shakespeare Area, District of Sudbury; ODM, Geoscience Report No. 139, 52p. Accompanied by Map 2313, scale 1 inch to ¼ mile.

OGS, AFRO, Toronto - Shakespeare Township, Drill Log Report Nos. 12 and 13, Falconbridge Nickel Mines Limited, 1968.
- Technical File No. 63.2339, Pick Mines Limited, 1968.
- Technical File No. 63.2211, Broulan Reef Mines Limited, 1968-1969.
- SMDR File No. 001101.

Remarks:

Four drill holes were drilled from the ice on Agnew Lake Quartz-pebble conglomerate and pellite of the Matinenda Formation was intersected at the 210 foot level. Radioacitve lenses were pyritic and geiger counter readings were up to 3 times the background.

Name and Location:

Satellite Metal Mines Limited
Latitude 46° 21' 47" N Longitude 81° 49' 23" W
Shakespeare Township

References:

Card, K.D. and Palonen, P.
1974: Satellite Metal Mines Limited; p.45, *in* Geology of the Dunlop-Shakespeare Area, District of Sudbury; ODM, Geoscience Report No. 139, 52p. Accompanied by Map 2313, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - SMDR File No. 0000424
- Technical File No. 63.2211, Broulan Reef Mines Limited, 1968.

Remarks:

A scintillometer survey and drilling in northern Shakespeare Township located one radioactive zone 30 feet wide in Huronian argillaceous quartzite.

Name and Location:

H. Schlesinger
Latitude 46° 17' 02" N Longitde 81° 50' 31" W
Shakespeare Township

References:

Card, K.D. and Palonen, P.H.
1974: H. Schlesinger; p.45, *in* Geology of the Dunlop-Shakespeare Area, District of Sudbury, ODM Geoscience Report No. 139, Accompanied by Map 2313, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Technical File No. 63.2246, Birch Point Mines Limited, Great Yukno Mines Limited, and Sheeley Mining Corporation Limited, 1967.
- Technical File No. 2.2293, Kerr Addison Mines Limited, 1976.
- SMDR File No. 001100.

Remarks:

A slightly radioactive zone was encountered during geological and scintillometer surveys. The best assay from pebble conglomerates was 0.015% U_3O_8.

Name and Location:

Astrabrun Mines Limited
Latitude 47° 49' 28" N Longitude 81° 39' 46" W
Stetham Township

References:

Pyke, D.R., Ayres, L.D., and Innes, D.G.
1973: Timmins-Kirkland Lake, Cochrane, Sudbury, and Timiskaming Districts; Ontario Division of Mines, Geological Compilation Series Map 2205, scale 1:253,440 or 1 inch to 4 miles.

OGS, AFRO, Toronto
- Stetham Township, Drill Log Report No.10, Astrabrun Mines Limited.
- Technical File No. 63.3243, Astrabrun Mines Limited
- Stetham Township, Drill Log Report Nos. 13 and 14, Jonsmith Mines Limited.
- Technical File No. 2.2131, Beach Gold Mines Limited.
- SMDR File No. 000428.

Remarks:Early

Early Precambrian Archean granitic rocks are exposed along the southern shore of Kenetogami Lake. At one location along the shore, a line of mafic rocks is intruded by radioactive pegmatite with the presence of shearing and faulting in the mafic rocks at the contact.

Name and Location:

Denison Mines Limited, Bull Lake
Latitude 47° 03' 50" N Longitude 80° 33' 39" W
Turner Township

References:

Card, K.D., McIlwaine, W.H., and Meyn, H.D.
1973: Denison Mines Limited; p. 110-118, in Geology of the Maple Mountain Area, District of Timiskaming, Nipissing, and Sudbury; ODM Geological Report No. 106, 133p. Accompanied by Maps 2256, 2257, 2258,and 2259, scale 1 inch to 1 mile. Map 2260, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Turner Township , Drill Log Report No. 16, Dension Mines Limited, 1968.
- SMDR File No. 000406.

Remarks:

Minor radioactivity was detected in quartzite at 1,794 feet. It indicated poorly-sorted, dark grey, pyritiferous quartzite grading almost into greywacke.

Several pebble bands were located in the quartzite. Radioactivity was approximately three times the background.

In 1968 Denison Mines drilled to a depth of 2,159 feet.

Name and Location:

Noranda Explorations Company Limited (Pilgrim Creek)
Latitude 47° 03; 55" N Longitude 80° 37' 17" W
Turner Township

References:

Card, K.D., McIlwaine, W.H., and Meyn, H.D.
1973: Noranda Explorations Company Limited; p.115, *in* Geology of the Maple Mountain Area, District of Timiskaming, Nipissing, and Sudbury, ODM, Geological Report No. 106, 132p. Accompanied by Maps 2256, 2257, 2258, and 2259, scale 1 inch to 1 mile. Map 2260, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Technical File No. 63.2542, Canadian Johns Manville Company Limited, 1969.
- Turner Township, Drill Log Report Nos. 11 and 14, Noranda Explorations Company Limited, 1967 and 1969.
- SMDR File No. 001099.

Remarks:

The Huronian metasediments consist of quartzite, argillite, greywacke, and quartz-pebble conglomerate. The quartzite is slightly radioactive.

Name and Location:

Sugar Lake
Latitude 46°14'11"N Longitude 82°13'48"W
Victoria Township

References:

Robertson, J.A.
1976: Sugar Lake; p.50,76, *in* Geology of the Massey Area, Districts of Algoma, Manitoulin, and Sudbury; Ontario Division of Mines, Geoscience Report No. 136, 130p. Accompanied by Maps 2308 and 2309, scale 1 inch to 1/2 mile.

Survey of Mines (1957), Blind River Uranium Mines Limited; in Financial Post Survey of Mines, p.203.

OGS, AFRO, Toronto - Technical File No. 63A.234, Blind River Uranium Mines Limited,
- Technical File No. 2.2294,

- Technical File No. 2.2452,

Remarks:

The Espanola Formation here is locally radioactive. Assays indicated uranium, thorium, and niobium present in sheared, impure quartzite.

During 1954 and 1956 an aeroradiometric survey, and geological and geophysical mapping were carried out by Blind River Uranium Mines Limited.

Name and Location:

Towle, G, and Humpage, J.C.
Latitude 46° 13' 00: N Longitude 82° 15' 45" W
Victoria Township

References:

Robertson, J.A.
1968: Towle-Humpage Group; p.51, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No.9, 106p.

1976: Towle-Humpage; p. 105, in Geology of the Massey Area, Districts of Algoma, Manitoulin, and Sudbury; Ontario Division of Mines, Geoscience Report No. 136, 130p. Accompanied by Map 2308 and 2309, scale 1 inch to ½ mile.

OGS, AFRO, Toronto - Technical File No. 63A.235, J.C. Humpage and G. Towle, 1955-1962.
- SMDR File No. 001111.

OMNR Regional Geologists Files, Sault Ste. Marie, SSM 199.

Remarks:

Principal sedimentary formations outcropping in the area are quartzite and argillaceous sediments. The pebbly quartzite exhibit radioactivity up to 4 times the background. Greater radioactivity is found in the shear zones in the argillaceous type of sediment.

Greenwich Lake Occurrence

Commodity:

Uranium

Radioactive Minerals:

Uraninite

Location:

Latitude 48° 46' 57" N   Longitude 88° 51' 20" W
District of Thunder Bay
Map Reference: ODM Map 2232

Geology:

The uranium mineralization is found where Kenoran granite and pegmatitie intrudes granitic, biotite gneiss at a strike of N 75° E.
The radioactivity occurs mainly in tension and shear fractures and joints dipping 80° E and striking N 30° W. To the west of the fault is a white-to-grey, medium coarse-grained biotite-granite with scattered pegmatite segregations. Some of the fractures contain ¼ inch stringers of pitchblende assaying up to 27% U_3O_8 (RE), while the intervening granite assayed 0.08% U_3O_8. (RE)

Economic Features:

Two ore lenses outlined are 5.9 feet by 150 feet averaging 0.29% U_3O_8 (RE).
In 1975, Copper Lake Explorations had assays of up to 1.6 pounds per ton U_3O_8. The average across 37 feet was 0.4 to 0.6 pounds per ton U_3O_8.
In 1977 Rio Tinto Canadian Exploration Limited drilled three diamond drill holes. Assay ranged from 0.1 pound per ton over three feet to 0.5 pounds per ton U_3O_8 over two feet.
In 1978 Greenwich Lake Explorations Limited performed drilling, trenching, and sampling. The assays ranged from 0.001 to 0.073% U_3O_8.

History of Development:

1949: Tom Christianson discovered radioactivity 500 feet west of the shore of Greenwich Lake.

pre 1954: Trenching, line cutting, mapping, diamond drilling, and prospecting was completed by Great Lake Uranium Mines Limited.

1954: Sixteen diamond drill holes totalling 1,319 feet were drilled by Pan Canadian Development Company Limited.

1955: Trenching and drilling was completed by The Associates.

1956: Trenching and drilling was carried out by The Associates and Climax Molybdenum (B.C.) Limited.

1958: A geological survey was carried out by F.R. Joubin and Associates Limited.

1969: An airborne radiometric survey was completed by Univex Exploration and Development Corporation Limited.

1970: Fifty-one diamond drill holes totalling 6,580 feet were drilled by Univex Exploration and Development Corporation.

1974: Consolidated Shunsby acquired these claims.

1975: Copper Lake Explorations Limited performed radiometric and geological surveys.
Six diamond drill holes were drilled by Consolidated Monarch Metal Mines Limited.

1976: Geological and geophysical surveys were completed by Rio Tinto Canadian Exploration Limited.

1977: Rio Tinto Canadian Exploration Limited carried out scintillometer, spectrometer, and geological surveys as well as diamond drilling and trenching.

Late in 1977 Consolidated Shunsby Mines Limited changed their name to Greenwich Lake Exploration Limited.

1978: Greenwich Lake Explorations Limited drilled 21 diamond drill holes for 4,024 feet.

1979: Turam and induced polarization surveys were completed by Greenwich Lake Explorations Limited.

Principal References:

Canadian Mines Handbook (1975): MW Resources Limited, Published by the Northern Miner Press.

Carter, M.W.
1977: Greenwich Lake Area, District of Thunder Bay; p. 64-68, in Summary of Fieldwork 1977, by the Geological Branch, edited by V.G. Milne, O.L. White, R.B. Barlow, and J.A. Robertson, Ontario Geological Survey Miscellaneous Paper 75, 208 p.

Carter, M.W., McIlwaine, W.H., and Wisbey, P.A.
1973: Nipigon-Schreiber, Thunder Bay District; Ontario Division of Mines, Geological Map 2232, scale 1:253.440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Greenwich Lake Area; p. 88-89, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

OGS, AFRO, Toronto - Greenwich Lake Area, Drill Log Report No.10, Pan Canadian Development Company Limited, 1954.
- Technical File No. 63A.358, Greenwich Lake Area, 1958.
- Technical File No. 63.2484, Univex Exploration and Development Company, 1954.
- Greenwich Lake Area, Drill Log Report Nos. 11 and 13, Univex Exploration and Development Corporation Limited, 1970.
- Technical File No. 2.2072, Copper Lake Explorations Limited, 1975.
- Technical File No. 2.2295, Rio Tinto Canadian Exploration Limited, 1977.
- Techncial File No. 2.3128, Greenwich Lake Exploration Limited, 1979.
- SMDR File No. 000277.

New Insco Mines Limited Prospect

Commodity:

Uranium, niobium, and columbium.

Radioactive Minerals:

Uraniferous pyrochlore, betafite, and apatite.

Location:

Latitude 49° 01' 48" N Longitude 86° 42' 54" W
District of Thunder Bay
Map Reference: ODM Map 2232

Geology:

The Prairie Lake carbonatite-alkalic complex is a circular intrusion approximately 3.4 square miles in surface area. The entire complex is radioactive with the highest readings occurring at the contact between the outer carbonatite ring and the core of nepheline syenite. This contact can be traced for two miles between Centre and Anomaly Lakes. New Insco Mines Limited have exposed the contact in three places (Showings A,B, and C). In each location the contact is marked by betafite-bearing pyroxenite. This betafite is confined to the mixed rock - pyroxenite phase developed at the main carbonatite-syenite contact.

Economic Features:

A trench on Showing A assayed 0.045% U_3O_8 over 10 feet. Four drill holes on the B Showing (Jim's Showing) over a strike length of 320 feet averaged 0.1% U_3O_8 and 0.27% Cb_2O_5 across an average of 23 feet. Four trenches on the C Showing (North Highgrade Showing) over a distance of 130 feet averaged 0.045% U_3O_8 across an average width of 14 feet.
Work on the remainder of the complex has located significant concentrations of uraniferous polychlore and a fourth betafite occurrence at Showing D (Discovery Zone) averaged 0.085% U_3O_8. Estimated ore reserves are 109,024 tons grading 0.12% U_3O_8.

History of Development:

1968-1970: Ground radiometric, magnetic and geochemical surveys, diamond drilling totalling 1,742 feet and trenching totalling 1,375 feet was completed by Newmont Mining Corporation of Canada Limited.

1976: A geochemical survey was completed by International Minerals and Chemical Corporation (Canada).

Ground radiometric and geological surveys, pitting and trenching, and 150 overburden drill holes were all completed by New Insco Mines Limited.

1977: Fifteen diamond drill holes totalling 5, 053 feet were drilled by New Insco Mines Limited.

Principal References:

Carter, M.W., McIlwaine, W.H., and Wisbey, P.A.
1973: Nipigon-Schreiber, Thunder Bay District; Ontario Division of Mines, Geological Map 2232, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1981: The Uranium Deposits of Ontario-Their Distribution and Classification; Ontario Geological Survey Miscallaneous Paper 86, 37 p.

Sage, R.P.
1975: Prairie Lake Complex, District of Thunder Bay; p. 64-66, in Summary of Fieldwork, 1975 by the Geological Branch, edited by V.G. Milne, D.F. Hewitt, K.D. Card, and J.A. Robertson; Ontario Div. Mines MP 63, 158 p.

The Northern Miner, Vol. 62, No. 35, November 11, 1976, p. 17.

OGS, AFRO, Toronto- Killala Lake Area, Drill Log Reports 10 and 11, 1969 and 1976.
- Technical Report No. 2.2099, International Minerals and Chemical Corporation, 1976.
- Technical Report No.2.2372, New Insco Mines Limited, 1976.
- Technical Report No. 2.2555, New Insco Mines Limited, 1977.
- SMDR File No. 001127.

New Santiago Mines Limited Occurrence

Commodity:

Uranium, thorium, and niobium

Radioactive Minerals:

Unknown

Location:

Latitude 49°56'10"N Longitude 90°51'00"W
District of Thunder Bay
Map Reference: ODM Map 2169

Geology:

This occurrence is situated in the Sturgeon Lake alkaline syenite complex which cuts Early Precambrian volcanic rocks. Several radioactive zones up to 25 feet wide are associated with the contact and alteration zones and with the late pegmatites.

The Coveney Island contact zone has veinlets of red feldspar rock containing purple fluorite, sulphides, magnetite, and secondary carbonate.

Economic Features:

Four radioactive dikes were located here. The best assays were 0.15% U_3O_8 and 0.48% ThO_2 (RE) and o.o15 - 0.020% NbO_2.(RE)

The Anderson Island zone located 1,500 feet south of Anderson Lake is geologically similar to Coveney Island zone and assayed 0.006% U_3O_8.

A sample from the Sturgeon Narrows zone assayed 0.01% U_3O_8 and 0.01% Nb_2 (RE).

A sample from the Seaton Island zone approximately 1.5 miles southwest of the reference point assayed 0.04% U_3O_8 (RE).

History of Development:

1955: ODM dug pits six feet deep and four to five feet wide and also did geological mapping and spot radioactivity measurements.

1969: A geological survey was completed by W.G. Wahl Limited.

1970: An airborne electromagnetic and magnetic survey was completed by Consolidated Red Poplar Mines Limited and Green Point Mines Limited.

Electromagnetic and magnetometer surveys of the Six Mile Lake Area was completed by Texmont Mines Limited.

1971: Magnetometer and electromagnetic surveys were completed by Green Point Mines limited.

An airborne electromagnetic and magnetic survey was completed by Texmont Mines Limited and Sturdy Mines Limited.

Principal References:

Davies, J.C.; Pryslak, A.P., and Pye, E.G.
1970: Sioux Lookout-Armstrong Sheet, Kenora and Thunder Bay Districts; ODM, Geological Compilation Series, Map 2169, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Sturgeon Lake Area, New Santiago Mines; p.89, in Uranium and Thorium Deposits of Northern Ontario, ODM, MDC No. 9, 106p.

Rogers, D.P.
1964: Sturgeon Lake Alkaline Syenite Complex; p.42-44, in Metionega Lake Area, ODM, Geological Report No. 24, 53p.

OGS, AFRO, Toronto
- Technical File No. 63.2437, W.G. Wahl Limited, 1969.
- Technical File No. 63.2729, Consolidated Red Poplar MInes Limited and Green Point Mines Limited, 1970.
- Technical File No. 2.180, Texmont Mines, 1970.
- Technical File No. 2.416, Green Point Mines Limited, 1971.
- Technical File No. 2.382, Texmont Mines Limited, 1971.
- SMDR File 000314.

Sandy Stone Exploration and Development Company Occurrence (Charron Lake Group)

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 49°38'46"N Longitude 85°58'54"W
District of Thunder Bay
Map Reference: ODM Map 2141

Geology:

The host rock consists of metasediments underlain by granitic rocks of Early Precambrian era. Pegmatite intrusions can be found in the mica schists.

Economic Features:

The best assays averaged 0.02% U_3O_8 (radiometric equivalent).

History of Development:

1955 - 1957: 1,081 feet of diamond drilling was completed by Sandy Stone Exploration and Development Company.

Principal References:

Coates, M.E.
1967: Stevens Sheet, Thunder Bay District; ODM, Geological Map 2141, scale 1:63,360 or 1 inch to 1 mile.

Hewitt, D.F.
1967: Sandy Stone, Charron Lake Group Occurrence; p.55, in Pegmatite Mineral Resources of Ontario, ODM, IMR No. 12,

Lang, A.H.; Griffith, J.W.; and Steacy, H.C.
1962: Canadian Deposits of Uranium and Thorium, G.S.C., Economic Geology Series No. 16 (Second edition).

Robertson, J.A.
1968: P.M. Bartz Occurrence; p.90, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OMNR, Resident Geologist's Files, Kenora.

OGS, AFRO, Toronto - SMDR File 000278.

Sandy Stone Exploration and Development Company Occurrence
(Kassagimini Lake Group)

Commodity:

Uranium

Radioactive Minerals:

Uraninite

Location:

Latitude 49°43'20"N Longitude 85°51'20"W
District of Thunder Bay
Map Reference: ODM Map 2141

Geology:

Uranium mineralization is associated with pegmatite intrusions in the mica schist.

Economic Features:

The best assay obtained was 0.08% U_3O_8 (radiometric equivalent).

History of Development:

1955 - 1957: Five diamond drill holes were drilled totalling 1,084 feet completed by the Sandy Stone Exploration and Development Company.

Principal References:

Coates, M.E.
1967: Stevens Sheet, Thunder Bay District; ODM, Geological Map 2141, scale 1:63,360 or 1 inch to 1 mile.

Robertson, J.A.
1968: Sandy Stone Exploration and Development Company; p.87-77, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File 000279.

OMNR, Resident Geologist's Files, Kenora.

Longlac Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 49°45'00"N Longitude 86°31'00"W
Daley Township
Map Reference: ODM Map 2101

Geology:

Radioactivity is associated with thorium.

Economic Features:

Samples assayed 1.87 and 5.31% U_3O_8 (RE)
One sample assayed 0.15% U_3O_8 (Chem)

Principal References:

Lang, A.H.
1952: Longlac Occurrence; p.119, in Canadian Deposits of Uranium and Thorium (Interim Account), Geological Survey of Canada, Economic Geology Series No. 16, 173p.

Pye, E.G.; Harris, F.R.; Fenwick, K.G.; and Baillie, J.
1966: Tashota-Geraldton Sheet, Thunder Bay and Cochrane Districts; ODM, Geological Compilation Series, Map 2102, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: A. Brisebois Occurrence; p.90, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Innes Lake

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 48° 50' 50"N Longitude 88° 45' 18" W
Dorion Township
Map Reference: ODM Map 2232

Geology:

This claim straddles the Good Morning Lake Fault. The fault strikes 330° and predates late Keweenawan fractures which strike 60°.
Radioactive concentrations have been detected on hematite-quartz breccias.
Assays of grab samples by the Geological Survey of Canada indicated 0.13 to 1.27 pounds per ton U_3O_8.

References:

OMNR, Resident Geologist's Files, Kenora.

Carter, M.W., McIlwaine, W.H., and Wisbey, P.A.
1973: Nipigon-Schreiber, Thunder Bay District; Ontario Division of Mines, Geological Map 2232, scale 1;253,440 or 1 inch to 4 miles.

Franklin, J.M.
1978: Uranium Mineralization in the Nipigon Area, Thunder Bay District of Ontario; Current Research, Part A, Geol. Surv. Can., Paper 78-1A, p. 275-282.

Robertson, J.A.
1981: The Uranium Deposits of Ontario-Their Distribution and Classification; Ontario Geological Survey Miscallaneous Paper 86, 37 p.

Name and Location:

Celotti
Latitude 48°47'50"N Longitude 88°52'30"W
District of Thunder Bay

References:

OGS, AFRO, Toronto - Technical File No. 2.2072, Greenwich Lake Area, 1975.

OMNR, Resident Geologist's Files, Kenora.

Remarks:

A zone of uranium mineralization extends for approximately 1,300 feet across the southern portion of claim TB430716.

The most radioactive section occurs near the east end of this zone and is 37 feet in width.

Uranium mineralization occurs in two albitite horizons and within para-gneissic metasediments adjacent to the albitite bands. The albitite consists of coarse-grained white plagioclase feldspar, quartz as grains and segregations, subordinate biotite and minor muscovite.

Average radiometric assays across 37 feet were 0.4 to 0.6 pounds per ton U_3O_8.

Name and Location:

Pic Bamoos Prospecting Syndicate
Latitude 48° 42' 31" N Longitude 86° 20' 24" W
District of Thunder Bay

References:

Milne, V.G., Giblin, P.E., Bennett, G., Thurston, P., Wolfe, W.J., Giguere, J.F., Leahy, E.J., and Rupert, R.J.
1972: Manitouwadge-Wawa Sheet, Sudbury, Cochrane, Algoma, and Thunder Bay Districts; Ontario Division of Mines, Geological Compilation Map 2220, scale 1:253,440 or 1 inch to 4 miles.

Puskas, F.P.
1967: Cold Spring Granite Group, Port Coldwell Alkalic Complex; p. 86-87, in Geology of the Port Coldwell Area, ODM, Open File Report No. 5014, 92 p.

Robertson, J.A.
1968: Pic Bamoos Prospecting Syndicate; p. 87, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 P.

OGS, AFRO, Toronto - SMDR File No. 000434.

Remarks:

The area is dominated by the Port Coldwell Precambrian alkalic complex. Radioactive mineralization occurs in deposits of fractured and sheared pegmatites. Samples submitted in 1949 were from a zone of pegmatite 40 feet thick, assayed 0.01% and 0.45% U_3O_8 (RE).

Name and Location:

Squaw Lake
Latitude 50°03'45"N Longitude 90°43'00"W
District of Thunder Bay

References:

Davies, J.C.; Pryslak, A.P.; and Pye, E.G.
1970: Sioux Lookout-Armstrong Sheet, Kenora and Thunder Bay Districts; ODM, Geological Compilation Series, Map 2169, scale 1:253,440 or 1 inch to 4 miles.

Sage, R.P.
1976: Carbonatite-Alkalic Complexes; p.56-79, in Summary of Fieldwork, 1976, by the Geological Branch, edited by V.G. Milne, W.R. Cowan, K.D. Card, and J.A. Robertson, Ontario Division of Mines, MP 67, 183p.

Remarks:

Trowell (1976) divided these rocks into two broad groupings. These are coarse-grained to pegmatitic alkalic phases of syenite and monzonite in the north half and medium-grained, equigranular and quartz-bearing syenite, syenomonzonites and monzonite in the south half.

Name and Location:

Univex Exploration and Development Corporation Limited
Latitude 48° 50' 30" N Longitude 88° 53' 00" W
District of Thunder Bay

Reference:

Carter, M.W.
1978: Greenwich Lake Area, District of Thunder Bay; p.64-68, *in* Summary of Fieldwork, 1977, by the Geological Branch, edited by V.G. Milne, O.L. White, R.B. Barlow, and J.A. Robertson, OGS, MP 75, 208p.

Remarks:

Airborne radiometric surveys were taken over migmatite areas. Diamond drilling that followed detected low amounts of uranium and thorium.

Name and Location:

W. Yzerdraat
Latitude 50°09'41"N Longitude 87°38'40"W
District of Thunder Bay

References:

Amukun, S.E.
1977: W. Yzerdraat; p.80, in Geology of the Tashota Area, OGS, Report 167, 40p.

OGS, AFRO, Toronto - Technical File No. 2.2114, Walter Yzerdraat, 1967.
- Technical File No. 2.2283, Walter Yzerdraat, 1967.
- Technical File No. 2.2572, Radiometric Survey of the Metcalfe Lake Area, W. Yzerdraat, 1977.
- Technical File No. 2.2874, Geological Survey of the Metcalfe Lake Area, W. Yzerdraat, 1979.
- Technical File No. 2.3043, Radiometric Survey of the Metcalfe Lake Area, 1979.
- SMDR File 001140.

Remarks:

The country rock in this area lies in a large northwest-southwest trending greenstone belt bordered by granite and other felsic intrusives to the west and the south. These rocks are intruded by diabase and porphyritic diabase. The greenstone has undergone a northwest-southwest compression.

Name and Location:

Hemlo
Latitude 48°41'50"N Longitude 85°55'00"W
Bomby Township

References:

Lang, A.H.; Griffith, J.W.; and Steacy, H.R.
1962: Hemlo Occurrence; p.263, in Canadian Deposits of Uranium and Thorium, Economic Geology Series No. 16 (Second Edition), 324p.

Robertson, J.A.
1968: Lake Superior Mining Corporation; p.90, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Remarks:

Radioactivity was discovered at a gold prospect owned by Lake Superior Mining Corporation near Hemlo.

Five parallel radioactive zones have been found along a contact between biotite granite and greenstone. Anomalies up to ten times the background have been obtained. Two samples sent to the Geological Survey of Canada showed 0.06 and 0.09% U_3O_8 (RE).

Name and Location:

Kakabeka Falls
Latitude 48° 24' 00" N Longitude 89° 35' 15" W
Conmee Township

References:

Fenwick, K.C., and Scott, J.F.
1977: 1976 Report of the Northcentral Regional Geologist; p. 42-56 in Annual Reort of the Regional and Resident Geologists, 1976, edited by C. R. Kustra, OGS, MP 71, 142 p.

Pye, E.G. and Fenwick, K.G.
1963: Atikokan-Lakehead Sheet, Kenora, Rainy River and Thunder Bay Districts; ODM Map 2065, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1981: The Uranium Deposits of Ontario-Their Disribution and Classification; OGS, MP 86, 37 p.

Remarks:

Two grab samples of mud-ball tuff of the upper tuffaceous shale facies of the Gunflint Formation at the Ontario Hydro diversion plant at Kakabeka Falls, each assayed 0.004% U_3O_8 .

Name and Location:

Dorion Amethyst Mine
Latitude 48°49'00"N Longitude 88°35'40"W
Dorion Township

References:

Franklin, J.M., and Mitchell, R.H.
1977: Lead-zinc-barite veins of the Dorion Area, Thunder Bay District, Ontario; Can. J. of Earth Sci., Vol. 14, No. 9, p.1963-1979.

McIlwaine, W.H., and Tihor, L.A.
1975: Dorion-Wolf Lake Area (Eastern Part), District of Thunder Bay; Ontario Division of Mines, PM P.995, Geological Series, scale 1 inch to 1/4 mile or 1:15,840. Geology 1972.

Robertson, J.A.
1981: The Uranium Deposits of Ontario - Their Distribution and Classification; OGS, MP 86, 37p.

Remarks:

The Dorion vein has dolomite of the Rossport Formation on its southeast wall and Archean monzonite on its northwest wall.

The vein extends along a strike for approximately 5,000 feet and consists of five separate veins.

The veins contain 20% and locally up to 80% breccia fragments. They include unaltered quartz monzonite and highly silicified dolomite.

Name and Location:

Eric Nelson
Latitude 48°39'48"N Longitude 89°53'25"W
Goldie Township

References:

Pye, E.G.; and Fenwick, K.G.
1965: Atikokan-Lakehead Sheet, Kenora, Rainy River and Thunder Bay Districts; ODM, Geological Compilation Series, Map 2065, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: E. Nelson Occurrence; p.87, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File 000432.

Remarks:

Uraninite mineralization occurs in a feldspar-quartz-biotite veinlet, one inch wide and showed radioactivity two times the background.

Name and Location:

J. Tessier and E. Williamson
Latitude 49°00'10"N Longitude 88°29'00"W
Hele Township

References:

Coates, M.E.
1972: Uranium, Hele Township Occurrence; p.33, *in* Geology of Black Sturgeon Lake Area, District of Thunder Bay, ODM, Geological Report No. 98, 41p. Accompanied by Maps 2233, 2234, 2235 and 2236, scale 1 inch to 1 mile.

Robertson, J.A.
1968: J. Tessier and E. Williamson Occurrence; p.86, *in* Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File No. 00043.

Remarks:

Uranium mineralization occurs in a pegmatite dike two to eight feet wide. This anomalous zone corresponds with a narrow steep-walled valley in biotite-quartz, feldspar gneiss that was intruded lit-par-lit by pegmatite.

Name and Location:

Molson Lake
Latitude 48°41'40"N Longitude 85°54'10"W
Laberge Township

References:

Milne, V.G.; Giblin, P.E.; Bennett, G.; Thurston, P.; Wolfe, W.J.; Giguere, E.J.; Leahy, E.J.; and Rupert, R.J.
1972: Manitouwadge-Wawa Sheet, Algoma, Cochrane, Sudbury and Thunder Bay Districts; Geological Compilation Series, Map 2220, Ontario Division of Mines, scale 1:253,440 or 1 inch to 4 miles.

Prasad, N.
1981: Molson Lake Occurrence; p.31, in Distribution of Uranium and Thorium Occurrences in Canada, Dept. of Energy, Mines and Resources, Geological Survey of Canada, Open File Report No. 551, 124p.

Remarks:

Radioactivity was found in five zones along a contact of granite and greenstone.

Name and Location:

A. Punkari
Latitude 48°41'00"N Longitude 85°37'20"W
Laberge Township

References:

Milne, V.G.; Giblin, P.E.; Bennett, G.; Thurston, P.; Wolfe, W.J.; Giguere, E.J.; Leahy, E.J.; and Rupert, R.J.
1972: Manitouwadge-Wawa Sheet, Algoma, Cochrane, Sudbury and Thunder Bay Districts; Geological Compilation Series, Map 2220, Ontario Division of Mines, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Township Laberge (71); p.90, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

OGS, AFRO, Toronto - SMDR File 000262.

Remarks:

This occurrence is in an area underlain by felsic igneous rocks of Early Precambrian era, located in the Superior Structural Province.

No other data available.

Name and Location:

Port Monroe (Potvine Property)
Latitude 48° 46' 42" N Longitude 86° 26' 27" W
McCoy Township

References:

Milne, V.G., Giblin, P.E., Bennett, G., Thurston, P., Wolfe, W.J., and Rupert, R.J.
1972: Manitouwadge-Wawa Sheet, Sudbury, Cochrane, Algoma, and Thunder Bay Districts; Ontario Division of Mines, Geological Compilation Map 2220, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Port Monroe Prospecting Syndicate; p. 90, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

OGS, AFRO, Toronto - SMDR File 000266.

Remarks:

Radioactive fractures have been found in red syenite dikes cutting amygdaloidal lavas. The fracture system averages approximately 3 inches wide and 200 hundred feet long. Samples assayed up to 0.19% U_3O_8. (chem) and 0.07% U_3O_8(RE).

Name and Location:

Port Arthur
Latitude 48°24'53"N Longitude 89°15'48"W
McIntyre Township

References:

Pye, E.G.; and Fenwick, K.G.
1965: Atikokan-Lakehead Sheet, Kenora, Rainy River and Thunder Bay Districts; ODM, Geological Compilation Series, Map 2065, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Port Arthur; p.87, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106p.

Tanton, T.L.
1931: Anthraxolite; p.201, in Fort William and Port Arthur and Thunder Bay Cape Map Areas, Thunder Bay District, Ontario, GSC, Memoir 167,222p.

OGS. AFRO, Toronto - SMDR File 000274.

Remarks:

Uranium mineralization occurs in narrow veins, seldom more than six inches wide, of anthraxolite which fills fractures in Animikie sediments diabase.

Also present in minor amounts are silver, argentite, galena, chalcopyrite, sphalerite, pyrite, quartz, calcite, fluorite, and barite.

A grab sample assayed at 0.0034% U_3O_8 (chem).

Name and Location:

Enterprise Mine
Latitude 48°30'46"N Longitude 88°37'12"W
McTavish Township

References:

Franklin, J.M.
1978: Uranium Mineralization in the Nipigon Area, Thunder Bay District of Ontario; p.275-282, Current Research Part A, Geological Survey of Canada, Paper 78-1A, 558p.

Robertson, J.A.
1981: The Uranium Deposits of Ontario - Their Distribution and Classification; OGS, MP 86, 37p.

Ruzicka, V.
1977: Assessment of Selected Uranium Occurrences and Areas Favourable for Uranium Mineralization in Canada; p.27-29, in Report of Activities Part A, Geological Survey of Canada, Paper 77-1A, 527p.

Remarks:

The Enterprise mine's main amethyst vein is the only uranium bearing vein of a group of lead-zinc-barite veins found throughout the southern part of the Sibley Basin.

These veins occur in Rossport dolomite immediately above the zone where the Pass Lake sandstone thins against the Archean paleo-positive area that is composed of quartz monzonite. (Franklin, 1978).

According to Ruzicka (1976), uranium mineralization in the Sibley Formation, approximately 10 m above the pre-Sibley unconformity was identified by H.R. Steacy and A.G. Plant as coffinite. The coffinite runs and replaces pyrite grains and also occurs as irregular masses.

Name and Location:

Pearl Lake
Latitude 48°39'40"N Longitude 88°39'35"W
McTavish Township

References:

McIlwaine, W.H.
1971: McTavish Township (West Part of North Half), District of Thunder Bay; ODMNA, Preliminary Geological Survey, Map P.720, scale 1 inch to 1/4 mile. Geology 1971.

Robertson, J.A.
1981: Thunder Bay Area; p.25, in The Uranium Deposits of Ontario - Their Distribution and Classification; OGS, MP 86, 37p.

Remarks:

The regional geology here includes the sediments of the Sibley Group and at the contact between biotite quartz monzonite grandiorite and sediments of the Sibley Group.

Name and Location:

C. Cramette
Latitude 48°46'00"N Longitude 86°25'00"W
O'Neill Township

Reference:

Lang, A.H.
1962: Canadian Deposits of Uranium and Thorium, Geological Survey of Canada, Economic Geology Series No. 16, (Second edition), 324p., p.257.

Remarks:

A discovery made by C. Cramette yielded two samples that showed 0.06 and 0.07% U_3O_8 (radiometric equivalent).

Name and Location:

D.E. Smith
Latitude 48° 35' 28" N Longitude 86° 09' 20" W
Pic Township

References:

Milne, V.G., Giblin, P.E., Bennett, G., Thurston, P., Wolfe, W.J., Giguere, J.F., Leahy, E.J., and Rupert, R.J.
1972: Manitouwadge-Wawa Sheet, Sudbury, Cochrane, Algoma, and Thunder Bay Districts; Ontario Division of Mines, Geological Compilation Map 2220, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: D.E. Smith Occurrence; p. 90, in Uranium and Thorium Deposits of Northern Ontario, ODM, MRC No. 9, 106 p.

OGS, AFRO, Toronto - SMDR File No. 000267.

Remarks:

Mineralization is associated with a shear zone located in the syenite-pegmatite areas up to 3 feet by 3 feet. Radiometric readings are up to 11 times the background. Tests indicate radioactivity is due entirely to thorium.

Name and Location:

Deadhorse Creek
Latitude $48^{\circ}53'00''$N Longitude $86^{\circ}39'20''$W
Walsh Township

References:

Fenwick, K.G., and Scott, J.F.
1978: Report of the North Central Regional Geologist; p.46, *in* Annual Report of the Regional and Resident Geologists, 1977, edited by C.R. Kustra, OGS, MP 78, 121p.

Sage, R.P.
1978: Radioactive Diatremes North of Lake Superior; p.53-66, *in* Summary of Fieldwork, 1978, by the OGS, edited by V.G. Milne, O.L. White, R.B. Barlow, and J.A. Robertson, OGS, MP 82, 235p.

Walker, J.W.R.
1954: Jackfish-Middleton Area, Thunder Bay District; Ontario Division of Mines, Map 2107, scale 1:31,680 or 1 inch to 1/2 mile.

OGS, AFRO, Toronto - Technical File 2.2844, Gulf Minerals Canada Limited, 1978.
- Drill Log Reports No. 20 and 21, Gulf Minerals Canada Limited, 1978.

Remarks:

This occurrence is associated with a diatreme located in the Archean greenstone belt west of the Coldwell alkaline complex. It crosscuts Archean metavolcanics and pyroclastics.

The matrix is green and consists of carbonate and a greenish amphibole. Embedded in this are clasts of varying size and angularity.

A scintillometer survey traced the diatreme for 500 m in a north-south direction, 275 m west of, and 400 m northeast of of Deadhorse Creek.

Assays of grab samples showed values of 0.003 and 0.004% U_3O_8.

Name and Location:

McKellar Creek
Latitude 48°51'40"N Longitude 86°41'00"W
Walsh Township

References:

Robertson, J.A.
1981: The Uranium Deposits of Ontario - Their Distribution and Classification; OGS, MP 86, 37p.

Sage, R.P.
1978: Radioactive Diatremes North of Lake Superior; p.53-66, in Summary of Fieldwork, 1978, by the OGS, edited by V.G. Milne, O.L. White, R.B. Barlow, and J.A. Robertson, OGS, MP 82, 235p.

Walker, J.W.R.
1954: Jackfish-Middleton Area, Thunder Bay District; Ontario Division of Mines, Map 2107, scale 1:31,680 or 1 inch to 1/2 mile.

Remarks:

This complex consists of two outcrops and numerous patches of radioactive rubble.

The diatreme has a north-south axis approximately 240 m and a maximum width of 60 m.

Radioactive breccia occurs within outcroppings of Early Precambrian fine-grained schistose, argillite and siltstone.

Max Kaplan Occurrence

Commodity:

Uranium

Radioactive Minerals:

Unknown

Location:

Latitude 48° 09' 48" N Longitude 79° 53' 10' W
Lebel Township
Map Reference: ODM Map 2205

Geology:

This occurrence is associated with greenish-black, tuffaceous greywacke with areas of quartzite. To the west, the radioactive beds branch out for a totall length of 1,600 feet with widths up to 8 feet. This unit has an average dip of 80° to the north.

Economic Features:

In 1957 a radioactive boulder assayed 2.16 pounds per ton U_3O_8. A 5 foot chip sample yielded the highest assay at 2.0 pounds per ton U_3O_8.
Diamond drilling revealed an ore grade section that was 3.5 feet wide containing 1.5 pounds per ton U_3O_8.

History of Development:

: Initially explored as part of the Crystal Kirkland Property.

1957: Rio Algom Mines Limited dug trenches.

: Rio Algom Mines Limited drilled seven diamond drill holes.

Principal References:

Pyke, D.R., Ayres, L.DL., and Innes, D.G.
1973: Timmins-Kirkland Lake, Cochrane, Sudbury, and Timiskaming Districts; Ontario Division of Mines, Geological Compilation Series Map 2205, scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Max Kaplan Property; p.92, in Uranium and Thorium Deposits of Northern Ontario, ODN, MRC No.9, 106p.

1981: The Uranium Deposits of Ontario - Their Distribution and Classification; Ontario Geological Survey Miscellaneous Paper 86, 37p.

Name and Location

Cane Township
Latitude 47°36'10N Longitude 80°02'00"W
Cane Township

References:

Lovell, H.L. and Ploeger, F.R.
1977: 1976 Report of the Kirkland Lake Resident Geologist; p.77-94 in Annual Report of the Regional and Resident Geologists, 1976; edited by C.R. Kustra, Ontario Geological Survey, Miscellaneous Paper MP 71, 142p.

Pyke, D.R., Ayres, L.D., and Innes, D.G.
1971: Timmins-Kirkland Lake, District of Cochrane, Sudbury, and Timiskaming, Ontario Division of Mines, Map 2205, Geological Compilation Series, Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Windy Hill Mining Corporation Limited, p.90 in Uranium and Thorium Deposits of Northern Ontario Ontario Division of Mines, Mineral Resources Circular No.9, 106p.

Remarks:

Radioactivity was detected intermittently along 1.5 kilometres between diabase and quartzose of the Lorrain Formation

The uranium-bearing mineral was identified as pitchblende by R. Thomson formerly of the Ontario Department of Mines (unpublished report in Resident Geologist's Files, Ontario Ministry of Natural Resources, Kirkland Lake).

It is associated with carbonate veins and with ganophyre differentiates (aplite and micropegmatite) and diabase of varied texture near the upper contact of a Nipissing diabase basement 8 to 16 kilometres in diameter.

Name and Location:

Kerr Lake Mine
Latitude 47°22'20"N Longitude 79°39'13"W
Coleman Township

References:

Card, K.D., and Lumbers, S.B.
1975: Sudbury-Cobalt, Districts of Cochrane, Sudbury, and Timiskaming, Ontario Division of Mines Map 2364. Geological Compilation Series scale 1:253,440 or 1 inch to 4 miles.

Prasad, N.
1981: Kerr Lake Mine Occurrence; p.65 in Distribution of Uranium and Thorium Occurrences in Canada, Geological Survey of Canada, Department of Energy, Mines, and Resources, Open File Report 551, 124p.

Ruzicka, V.
1979: Uranium and Thorium in Canada, 1978; p.139-155 in Current Research Part A, Geological Survey of Canada Paper 79 1-A, 558p.

Remarks:

Radioactivity is associated with veins in diabase that intrude volcanics and sediments.

Name and Location:

Empire Gold Mines, Limited
Latitude 48°03'58"N Longitude 79°59'09"
[illegible]

References:

Pyke, D.R., Ayres, L.D., and Innes, D.G.
1973: Timmins-Kirkland Lake, Cochrane, Sudbury, and Timiskaming Districts. Ontario Division of Mines, Geological Compilation Series Map 2205 Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1968: Empire Gold Mines, Limited; p.93 in Uranium and Thorium Deposits of Northern Ontario, Ontario Division of Mines, Mineral Resources Circular No.9, 106p.

Remarks:

The Empire occurrence is located within a siliceous band of very lean iron formation that is cut by stringers of fine-grained, mafic intrusive rocks.

Radioactivity is confined to the face of one of the several joints that strike at south 70 degrees east and dip steeply to the north.

Name and Location:

M. Lunge
Latitude 48°04'51"N Longitude 79°59'10"W
Boston Township

References:

Robertson, J.A.
1968: M. Lunge Occurrence; p.93 in Uranium and Thorium Deposits of Northern Ontario; Ontario Division of Mines, Mineral Resources Circular No.9, 108p.

OGS, AFRO, Toronto
Technical File No.63.3094, Marshall Boston Iron Mines, Ltd., 1972.

Technical File No. 2.836, Raymond.

Remarks:

Radioactivity is found within irregular dikes of pink syenite cutting hornblendite.
The dikes are situated close to the southwest contact of the Lebel Syenite Stock and greenstone belt to the south.
In 1953 the occurrence was examined by W.S. Savage by a geiger counter.
In 1972 Marshall Boston Iron Mines, Limited, conducted magnetometer, electromagnetic, geological and geochemical surveys.

Name and Location:

Yost
Latitude 48°02'10"N Longitude79°59'12"W
Boston Township

References:

OGS, AFRO, Toronto
SMDR File No.000324

Pyke, D.R., Ayres, L.D., and Innes, D.G.
1973: Timmins-Kirkland Lake, Cochrane,Sudbury, and Timiskaming Districts. Ontario Division of Mines, Geological Compilation Series Map 2205. Scale 1:253,440 or 1 inch to 4 miles.

Resident Geologists Files, Kirkland Lake

Remarks:

This occurrence is located within a small body of Aqlgoman syenite that intrudes volcanics.
Geiger counter readings were up to 3 times the background.

Name and Location:

Harrison-Hibbert Ruby Mines
Latitude 47°24'39"N Longitude 79°37'20"W
Timiskaming

References:

Card, K.D., and Lumbers, S.B.
1975: Sudbury-Cobalt, Districts of Cochrane, Sudbury, and Timiskaming, Ontario Division of Mines, Map 2361. Geological Compilation Series Scale 1:253,440 or 1 inch to 4 miles.

Sergiades, A.O.
1968: Silver Cobalt Calcite Vein Deposits of Ontario, Ontario Department of Mines, Mineral Resources Circular, No.10, 489p.

Remarks:

Uranium (up to 4 pounds per ton) occurred in a fault breccia in association with carbonate veins.

Name and Location:

Silvermaque Mine
Latitude 47° 20' 37" N Longitude 79° 38' 33" W
Gillies Limit

References:

Card, K.D. and Lumbers, S.B.
1975: Sudbury-Cobalt, Cochrane, Sudbury, and Timiskaming Districts; Ontario Division of Mines, Geological Compilation Series Map 2361, scale 1:253,440 or 1 inch to 4 miles.

Ruzicka, V.
1979: Uranium and Thorium in Canada, 1978; p. 139-155, in Current Research Part A, Geol. Surv. Canada, Paper 79-1A, 407p.

Remarks:

Radioactive mineralization was found in argillitic rocks on a dump of the Silvermaque Mine. The radioactive minerals were pitchblende and allanite.

Name and Location:

W. Spencer
Latitude 47°34'00"N Longitude 79°52'00"W
Hudson Township

References:

Lovell, H.L., and Fily, E.D.
1970: Kerns and Hudson Townships, District of Timiskaming, Ontario Division of Mines Map 2300. Geological Compilation Series, Scale 1:31,680 or 1 inch to 1/2 mile.

Lovell, H.L., and Ploeger, F.R.
1977: 1976 Report of the Kirkland Lake Resident Geologist; p.77-94 in Annual Report of the Resident and Regional Geologists, 1976, edited by C.R. Kustra, Ontario Geological Survey Miscellaneous Paper 71, 142p.

Remarks:

Uranium was detected in a 75 metre length of Gowganda Formation brecciated argillite, and argillite with a greenish black chloritic matrix. This breccia, adjacent to the upper contact of the diabase assayed 0.10 percent U_3O_8.

Name and Location

Bidgood Kirkland Mine
Latitude 48°10'05"W Longitude 79°54'45'W
Lebel Township

References:

Lovell, H.L., and Ploeger, F.R.
1977: 1976 Report of the Kirkland Lake Resident Geologist; p.77-94 in Annual Report of the Regional and Resident Geologists, 1976, edited by C.R. Kustra, Ontario Geological Survey Miscellaneous Paper MP71, 142p.

Pyke, D.R., Ayres, L.D., and Innes, D..G.
1971: Timmins-Kirkland Lake, Districts of Cochrane, and Timiskaming, Ontario Division of Mines, Map 2205 Geological Compilation Series, Scale 1:253,440 or 1 inch to 4 miles.

Robertson, J.A.
1981: The Uranium Deposits of Ontario - Their Distribution and Classification; Ontario Geological Survey, Miscellaneous Paper 86, 37p.

Remarks:

At the former gold-silver mine, radioactivity was detected by D. Lowe in 1966 across 90 metres and along 360 metres of intermittent outcrop. Radioactivity is more intense in interbedded conglomerate and greywacke and is most intense in rocks containing quartz veins.

Assays were 0.2 pounds per ton U_3O_8 (RE).

Name and Location:

Hurd, D.
Latitude 48° 08' 46" N Longitude 79° 58' 04" W
Lebel Township

References:

Pyke, D.R., Ayres, L.D., and Innes, D.G.
1979: Timmins-Kirkland Lake, Cochrane, Sudbury, and Timiskaming Districts; Ontario Division of Mines, Geological Compilation Series Map 2205,scale 1:253,440 or 1 inch to 4 miles.

OMNR Resident Geologists Files, Kirkland Lake.

Remarks:

Widespread radioactivity is caused mainly by thorium with little uranium present.

Name and Location:

Lebel Township
Latitude 48°09'50"N Longitude 79°55'00"W
Lebel Township

References:

Pyke, D.R., Ayres, L.D., and Innes, D.G.
1973: Timmins-Kirkland Lake, Cochrane, Sudbury and Timiskaming Districts. Ontario Division of Mines, Geological Compilation Series Map 2205. Scale 1 inch to 4 miles.

Robertson, J.A.
1968: Lebel Township General; p.92 in Uranium and Thorium Deposits of Northern Ontario, Ontario Division of Mines, Mineral Resources Circular No.9, 106p.

Ontario Division of Mines, Resident Geologist's Files, Kirkland Lake.

Remarks:

The Lebel occurrence is associated with a Timiskaming amygdaloidal trachyte cut by Algoman syenite.

Radioactivity was 3 to 4 times the backround over a 70 foot outcrop. Representative samples assayed 0.032-0.05% U_3O_8 (ODM, 1968, MRC No.9,p.92).

Name and Location:

Sauve and Inch
Latitude 47°45'00"N Longitude 80°15'40"W
Tudhorpe Township

References:

Johns. G.W.
1980: Hill Lake Area, District of Timiskaming, p.89-91 in Summary of Field Work, 1980, by the Ontario Geological Survey, edited by V.G. Milne, O.L. White, R.B. Barlow, J.A. Robertson, and A.C. Colvine, Ontario Geological Survey, Miscellaneous Paper 96, 201p.

Pyke, D.R., Ayres, L.D., and Innes, D.G.
1973: Timmins-Kirkland Lake, Cochrane, Sudbury and Timiskaming Districts, Ontario Division of Mines, Geological Compilation Series Map 2205, Scale 1:253,440 or 1 inch to 4 miles.

Regional Geologists Files, Kirkland Lake

Remarks:

This occurrence contains small amounts of pitchblende in a carbonate vein aling the contact of a Nipissing Diabase dike and Gowganda Formation conglomerate.
A sample assayed 1.56% U_3O_8 (RE).

INDEX

Abconore Uranium Mines Limited occurrence, Kirkwood township 100
Aberdeen Township 10
Abeta Mining Corporation Limited occurrence, Joubin township 84
Acko Mines Limited 270
Acme Oil and Gas Company Limited 319,321
Advance Murgor Exploration Limited 146
Aerobus Lake occurrence, District of Kenora 233
Aerosint Exploration Syndicate 176
Aggressive Mining Company Limited occurrence, Hallam township 327
Agressive Mining Company Limited 136,357
Agnew Lake Mines Limited 345
Agnico Mines Limited 126
Alanen, W. and Maki, E. occurrence, Drury township 319
Albanel Townsip 12
Alchib 100
Alcock, A. 247
Alcourt Mines Limited 323
Alexander, A. occurrence, Shakespeare township 357
Alexander, A. 341
Alford Explorations Limited occurrence, Drury township 380
Algom Uranium Mines Limited 18,24,33,35,56,58,90,169
Algoma Central Railway 112,228
Algoma Gold Mines 301
Alur Mines occurrence, Gaudette township 183
Amax Exploration Incorporated 10,349
Anabar Mining and Development Company occurrence, Timmermans township 154
Anderson, E. 291
Anglo-Barrington Mines Limited 241
Anschutz Oil Company 247
Anschutz Uranium Mines Limited occurrence, Timmermans township 223

Arco Triller #2 occurrence, Albanel Township 177
Armore Mines Limited 132
Asarco Company of Canada Limited - Splatter Lake
  - Eagle Mountain 295
Ascot Metal Corporation Limited occurrence, Tustin township 276
Assembly Mines Limited occurrence, Hutton township 329
  Hutton township 331
  Parkin township 343
Assembly Mines Limited 317
Astonish Uranium Mining Corporation Limited 209
Astrabrun Mines Limited occurrence, Stetham township 403
Aubay Uranium Mines Limited 301
Aubinadong River occurrence, Cassidy township 374
Aubrey Falls occurrence, Roots township 131

Balboa Uranium Mines Limited occurrence, Ermatinger township 323
Baldwin Township 305,307,309,311,313,315,371,372
Bamaji Lake occurrence, District of Kenora 234
Batchewana Uranium Mines Limited occurrence, Slater township 139
Beach Gold Mines Limited 365
Beard, R.C. 265
Beange Township 14,16,18,19
Bearhead Lake Fault prospect, District of Kenora 236
Bee Lake occurrence, Tustin township 297
Belair Lake occurrence, Disrict of Kenora 280
Belfast Mines Limited 175
Benchmark occurrence, Wabigoon township 279
Bidgood Kirkland Mine, Lebel township 449

Big Game Mines Limited occurrence, Timmermans township 155
Bigwood township 373
Black Lake occurrence, Mack township 201
Blind River Uranium Mines Limited occurrence, Kamichisitit township 190
Blind River Uranium Mines Limited 406
Blue Lake Mining Syndicate Limited 197
Blue, P.G. occurrence, Shakespeare township 398
Bluett Lake occurrence, Drope and Breithaupt townships 264
Bobcam Mines Limited occurrence, Slater township 141
Bolger township 21,22,24,178
Bomby township 424
Borden Lake occurrence, Gallagher township 382
Boston township 443,444,445
Bottle Bay occurrence, Temple township 274
Boymar Gold Mines Limited occurrence, Raimbault township 208
Bouck township 26,27,30,32,33,35,38
Bracemar Mines Limited occurrence, Lehman township 200
Bralorne Can-Fer Resources Limited 252
Brewis and White Limited, occurrence, Porter township 345
Bridges, J.R. occurrence Curtin township 378
Bridges township 257,259,261,293,294
British Columbia Explorers 60,182
Broulan Reef Mines Limited occuurence Baldwin township 305
  Baldwin township 307
  Shakespeare township 359
Broulan Reef Mines Limited 361,400,401
Brunette Porcupine Gold Mines Limited 167
Bucke township 446
Buckles Algoma Uranium Mines Limited 65
Buckles Mine, Gunterman township 65

Buckles township 40,42,44,47,49,51

Buffana Uranium Mines Limited occurrence, Timmermans township 157

Burning Rock Uranium Mines Limited 270,276

Burton , M. 339

Calmor Mines Limited occurrence, Pitt township 229

Cameron, M. and Alcock, C. occurrence, District of Kenora 239

Campbell, E.E 126

Cam Mines Limited 236

Camray Mines Limited occurrence, Slater township 142

Camray Mines Limited occurrence, Theano Point, Slater township 143

Canadian Johns-Manville Company Canada Limited 351 ,367,397,397,389,405 136,345

Canadian Johns-Manville Company Canada Limited occurrence,
  - Baldwin township 309
  - Grigg township 325
  - Marconi township 389

Canagau Mines Limited occurrence, Rix township 130

Candore Exploration Limited occurrence, Beange township 14

Cane township 441

Cane township occurrence, Cane township 441

Caneonti Mines Limited prospect, Sagard township 132

Can-Fer Mines Limited occurrence, Marconi township 390

Can-Met Mine, Buckles township 40

Can-Met Mines Limited 268

Canuc Mines Limited occurrence, Gaiashk township 182

Cassidy township 374

Celotti occurrence, District of Thunder Bay 419

Chemical Research Corporation (Canada) Limited occurrence, Porter township 347

Chemical Research Corporation (Canada) Limited 385

Chevrette, E. occurrence, Maclennan township 387

Chipman Lake Mines Limited 68

Chisholm , E.O. 256

Ciglen, S. 246

Clary township 275

Cobalt Consolidated Mining Corporation occurrence, Poulin township 126

Cody-Reco Mines Limited 321

Coffee Lake occurrence, Timmermans township 159

Coleman-Morton 246

Coleman township 442

Cominco Mines Limited 55,98,225

Conecho Mine, Buckles township 42

Conmee township 425

Consolidated Callinan Flin Flon Mines Limited occurrence, - Beange township 16

Consolidated Denison Mines Limited 159

Consolidated Fredrick Mines Limited 155

Consolidated Golden Arrow Mining Limited occurrence, Piche township 124

Consolidated Manitoba Mines Limited 241

Consolidated Montclerg Mines Limited 311,315

Consolidated Morrison Exploration Limited 337,345,349,347,351,361,385,395 323,333

Consolidated Northland Mines Limited 227

Consolidated Reactor Uranium Mines Limited 347

Consolidated Red Poplar Mines Limited	413
Consolidated Summit Mines Limited	252
Conwest Exploration Company Limited	264
Coral Rapids occurrence, Pitt township	231
Corner Lake occurrence, Gaiashk township	55
Coulee Lead and Zinc Mines Limited Prospect, Bridges township	257
Coulee Lead and Zinc Mines Limited	261
Cramette, C. occurrence, O'Neil township	435
Crazy Lake occurrence, Nicholas township	114
Crestland Mines Limited occurrence, Whitman township	227
Crotch Lake occurrence, Gunterman township	67
Creelman township	317,377
Cullis Lake occurrence, Day township	54
Daley township	417
Damascus Mines Limited occurrence, Peever township	115
Danaray Mines Limited	99
Davidson Lake occurrence, District of Kenora	241
Davidson, P.	246
Day township	54
Deadhorse Creek occurrence, Walsh township	437
Deauville Exploration Limited occurrence, Nairn township	393
Delcan Minerals Limited occurrence, Shakespeare township	399
Delcan Minerals Limited	327
Delta Minerals Limited	14
Demorest Lake occurrence, Montgomery township	206
Demorest township	379
St. Denis	16

Denison Mines Limited
- Can-Met Mine, Buckles township 40
- Denison Mine, Bouck township 27
- Roche Long Lac Mines Limited, occurrence Buckles township 47
- Roman Island occurrence, Buckles township 49
- Seagram township occurrence 397
- Stancan Uranium Mines Limited, Joubin Joubin township 92
- Stanrock Mine, Buckles township 51
- Timmermans township occurrence 160
- Turner township occurrence 404

Denison Mines Limited 14,22,154,159,162,201,252,225,313,315
Desbarats Mining Company Limited occurrence, Johnson township 187
Denvic Lake occurrence, Shedden township 137
Dolores Bench Resources 236
Dome Exploration (Canada) Limited 234
Dominion Gulf Company Limited occurrence
- Baldwin township 371
- May township 341
- Shakespeare township 361

Dominion Gulf Company Limited 359,307
Dorion townships 418,426
Doyon, MacLeod, McIntosh and Associates 331
Drury township 319,321,380
Duggan, S. 233
Duncan township 180,181
Dyno Mines Limited 355

East Bay Gold Mines Limited occurrence, Hyman township 337
East Bay Gold Mines Limited 385
Elmridge Mines Limited 355
El Pen-Rey Mines and Oils Limited 339
Empire Gold Mines Limited occurrence, Boston township 443
Erana Mines Limited 317,353
Ermatinger township 323
Espina Copper Development 319
Evans, H. 128
Evenlode Gold Mines Limited 315

Fairservice, R. occurrence, Bridges township 259
Faurservice, R. 288
Falconbridge Nickel Mines Limited occurrence, Rix township 130
Falconbridge Nickel Mines Limited 359
Fano Uranium Mines Limited occurrence, Juillette township 188
Fano Uranium Mines Limited occurrence, Timmermans township 224
Fano Uranium Mines Limited 329
Fausten occurrence, Smilsky township 149
Favourable Mines Limited 236
Firesand River occurrence, McMurray and Lastheels Townships 203
F. O. B. Mining and Exploration Limited 274
Foot Lake occurrence, MacNicol township 267
Fort Norman Exploration Incorporated occurrence, Timmermans township 225
Fort Norman Explorations Incorporated 12,21,22,24,114,157,161,164,177,209
Fraleck township 381
Franz, J.N. occurrence, Labelle township 102
French River occurrence, Bigwood township 373

Frye, H.E. occurrence, Lefroy township 198

Gaiashk township 55,56,58,60,182
Gaitwin Explorations Limited occurrence, Viel township 174
Gallagher township 382
Gardiner, M.C. occurrence, Jollineau Township 83
Gardiner, M.C. 186
Gateway Uranium Mines 14
Gaudette township 183
Gemico, A.G. occurrence, Boucks township 30
Geneva Lake Mines Limited 68
Genex Mines Limited occurrence, Gunterman township 68
Giles township 62
Gilles Limit 447
Gimby, J.E. occurrence, McAughey township 112
Glenair Mining Company Limited 305
God's Lake Mining Syndicate occurrence, Raimbault township 209
Golden Standard Mines Limited 270,272
Goldie township 427
Gowganda Syndicate 301
Grand Chibougamau Mines Limited 60
Grandad Warren-Consolidated Professor 367
Great Lakes Uranium 268
Greenwich Lake Area prospect, District of Thunder Bay 408
Greenwood township 64
Grey Trout-Blue Sky Lake occurrence, Sagard township 134
Grigg township 325
Gui-Por Uranium Mines and Metals Limited prospect, Bolger township 21
Gui-Por Uranium and Metal Mines Limited 331

Gulf Minerals Canada Limited 317,329,343,355
Gunmar Mining Limited 374
Gunterman township 65,67,68,70,72,74,77,80,81,184,185
Gutcher, J. occurrence, Harrow township 383,384

Habel township 228
Halladay, L.B. occurrence, District of Kenora 243
Hanna Mining Company Limited 12,114,329,252
Hanson, A. 125
Harico Mining and Development Company Limited 201
Harrison-Hibbert Ruby Mines Limited occurrence, Bucke township 446
Harrison-Hibbert Ruby Mines Limited 136
Harrison, J. 251
Harrison Minerals Limited occurrence , Turner township 136,369
Harrison and Perkins 254
Harrow township 383,384
Hathaway Metal Mines Limited occurrence, Kincaid township 99
Harvard Uranium Limited prospect, Sagard township 136
Hawk Lake occurrence, MacNicol township 268
Headvue Mines Limited occurrence, District of Kenora 244
Headvue Mines Limited 239,255
Headway Red Lake Gold Mines Limited occurrence, Bridges township 261
Hecla Mining Company of Canada Limited 114
Hele township 428
Hemlo occurrence, Bomby township 424
Hennessey Uranium Explorations Incorporated occurrence, Peever township 117
Heward Lake occurrence, District of Rainy River 303
Highland Prospecting Syndicate 102

Hirshorn, J.H. 108
Hollinger Mines Limited occurrence, Moncreiff township 392
Hollinger Mines Limited 208,339
Hornby Lake occurrence, District of Kenora 283
Huclif Porcupine Mines Limited occurrence, Labonte township 192
Hudson's Bay Mining Limited 231
Hudson's Bay Railway 228
Hudson township 448
Humphries, H.C. 355
Hunter Lake occurrence, Porter township 349
Huronian Mines Limited 252
Hurd, D. occurrence , Lebel township 450
Huston Lake occurrence, District of Kenora 285
Hutton township 329,331
Hyman township 333,335,337,385

Imperial Oil Company Limited 98,261,263,257,337
Ingamar Exploration Limited occurrence, Fraleck township 381
Ingamar Exploration Limited 317
Innes Lake prospect, Dorion township 418
Insco Mines Limited 321
Inspiration Mining and Development Limited occurrence, Piche township 125
International Bibis Tin Mines Limited 134
International Cobalt and Silver Mining Limited 327
International Minerals and Chemicals Corporation (canada) Limited 411
International Mine Services 329
International Mining and Development Limited occurrence, Gunterman township 184

International Standard Resources Limited 272
Iso Mines Limited occurrence, Gaiashk township 56
Issac Burns Exploration Company Limited 317

Jalore Mining Company Limited occurrence, Labonte township 193
James, E.B. occurrence, Rollins township 213
Jarvis township 186
Jayco Mines Limited 100
Jay-dee Enterprises Incorporated occurrence, Smilsky township 150
Jeanette Minerals Limited occurrence, Timmermans township 162
Jellicoe Mines Limited Espanola Bay occurrence, Baldwin township 311
Jellicoe Mines Limited occurrence, Baldwin township 313
Jellicoe Mines Limited 315
Jenson, M. occurrence, District of Kenora 245
Johnson Lake occurrence, District of Kenora 285
Jollineau township 83
Jonsmith Mines Limited occurrence, Stetham township 365
Joubin township 84,85,68,88,90,92,94,96
Joubin, F. 195
Juilette township 188,189

Kakabeka Falss occurrence, Conmee township 425
Kamichisitit township 98,190
Kamis Copper Mines Limited occurrence, Gunterman township 70
Kaplan, M. occurrence, Lebel township 439
Karpela, E. 134

Kee #2 occurrence, Kamichisitit township 98
Keevil Mining Group 236,301
Kenogamisis Gold Mine 317
Kenoratomic Mines Limited occurrence, MacNicol township 270
Kennco Explorations Limited 299,339
Kerr Addison Mine, Drury township 321
Kerr Addison Mines Limited 267,231,265,268,333,337,357
Kerr-McGee Corporation 150-151 occurrence, Bouck township 32
Kerr-McGee Corporation 24,30,86,96,200
Kerr Lake Mine, Coleman township 442
Kimber Lake occurrence, Docker township 263
Kimber Lake West occurrence, Bridges township 257
Kincaid township 99
Kinloch Mining Company Limited 38
Kirkland Townsite Gold Mines Limited 234
Kirkpatrick Lake occurrence, Lecaron township 197
Kirkwood township occurrence, Kirkwood township 191
Kirkwood township 100,191
Kram, K. and Glowaski, J. occurrence Langois township 386

Labelle township 102,104
Laberge township 429,430
Labine-McCarthy occurrence, Smilsky township 151
Labonte township 105,106,192,193,194,195,196
Lacnor Mine, Gunterman township 72
Lake Superior Provincial Park 62,102,196
Lake Superior Mining Corporation 108,424

Longois township	386
Lantz, E.O.	245
Lapaska Mines Limited occurrence, Labonte township	194
Larson township	107
Laurasia Reosurces Limited	134
Lebel Township occurrence, Lebel township	451
Lebel township	439,449,450,451
Lecaron township	197
Lefroy township	198,199
Lehman township	200
Leslie, L. occurrence, Creelman township	317
Linklatter	254
Little White River occurrence, Albanel township	12
Location X, occurrence, Long township	108
Long Lac Minerals and Explroation Limited	80,84
Longlac occurrence, Daley township	417
Long township	108,109
Loudon occurrence, Langton township	265
Lowe, D.	449
Lunge, M. occurrence, Boston township	444

MacFie Exploration Limited occurrence, Porter township 394
MacGregor, R.A. 193
Mack township 201
MacLeod-Cockshutt Gold Mines Limited 317
Maclennan township 339,387,388
MacNicol township 267,268,270,272, ,296
MacRae Mining Corporation 136,375,379
Madanwanson Lake occurrence, Starin township 219
Maeck township 202
Mainville Lake occurrence, Rainy River District 304
Manwood Mining Corporation Limited occurrence Slater township 216
Mallery, F. 257
Maralago Mines Limited 132
Marconi township 389,390
Marshall Boston Iorn Mines Limited 444
Martin, D.R. occurrence,Timmermans township 164
Massey Bay occurrence, Maclennan township 388
Matachewan Canadian Gold Mines Limited 192
Matinenda Uranium Mines Limited occurrence, Juilette township 189
Mattagami Mines Limited 311
Mattaini, C. and B. occurrence, Viel township 175
Maud Lake occurrence, Duncan township 181
May township 341
McAughey township 112
McCombe, J.G. 62
McCombe, J.G. occurrence Peever township 118
McCombe Mining and Exploration Limited 234
McCombe Mining Syndicate occurrence, Labonte township 105

McCoy township 431

McDevitt, D.L. occurrence, Labonte township 195

McDonough, E.P. occurrence Larson township 107

McDougall, D.J. 229

McIntyre porcupine Mines Limited occurrence, Morin township 113

McIntyre Porcupine Mines Limited 83,341

McKellar Creek occurrence, Walsh township 438

McLeod, J. 266

McMaster township 295

McMurray township 203,204

McTavish township 433,434

Mid-North Engineering Services Limited 394

Milliqua Mines Limited occurrence, Joubin township 85

Milliken Mine, Gunterman township 74

Mining Corporation of Canada Limited 84

Minorex Limited 239,244

Molson Lake occurrence, Laberge township 429

Moncrieff Uranium Mines Limited 357

Monestine township 205

Moneta Porcupine Mines Limited 162,229

Montgomery township 206

Moon Lake Mines Limited occurrence, Bolger township 22

Moon Lake Mines Limited occurrence, Timmermans township 165

Morin township 113,207

Mosher, A. 229

Mosher, A. and Byles, G. occurrence, Slater township 145

Monteagle Minerals Limited 337

Mount Lake Area occurrence, Sagard township 214

Murmac Lake Athabasca Mines Limited 146

Napray Mining Company Limited occurrence, Labonte township 106

Nasco Cobalt Silver Mines Limited occurrence, Joubin township 86

Neil, J.P. occurrence, Strathcona township 300

Nemegosenda Lake occurrence Collins and Chewitt townships 376

Nelson, Eric occurrence, Goldie township 427

New Campbell Island Mines Limited 272

New Jersey Zinc Explorations Company Canada Limited 21,22,94,155,165

New Insco Mines Limited Prospect, District of Thunder Bay 411

Newmont Mining Corporation Canada Limited 411

New Mylamaque Explorations Limited occurrence, Porter township 351

New Santiago Mines Limited occurrence, District of Thunder Bay 413

New Thurbois Mines Limited 335,395

Nickol Chemical Corporation 315

Noranda Mines Limited occurrences
- Clary township 375
- Demorest township 379
- Hyman township 333
- Turner township 405

Nordic Group West occurrence, Bolger township 24

Nordic Mine, Gunterman township 77

Nordic Resources Limited occurrence, Roberts township 353

Normingo Mines Limited 136

North American Nuclear Limited 56,85,86

North Creelman occurrence, Creelman township 377

Norsyncomaque Mines Limited 80

Northspan Mines Limited 19,38,44,58,65,72

Oak Lake occurrence, District of Kenora 286
Octopus Lake occurrence, District of Kenora 287
Ottawa Associates, The occurrence, Labelle township 104

Pacific Petroleums Limited 190
Paddington Lake occurrence, District of Kenora 288
Pancer occurrence, District of Kenora 246
Panel Consolidated Mines Limited 19,44,60,137
Panel Mine, Buckles township 44
Pardee Amalgamated Mines Limited occurrence, Joubin township 88
Pardo township 299
Parkin township 343
Parsons, G.E. 12
Parth, L. occurrence, Bridges township 293
Paterson Lake occurrence, District of Kenora 289
Patrick Uranium Mines Limited occurrence, Peever township 119
Patrick Uranium Mines Limited occurrence, Timmermans township 167
Pearl Lake occurrence, McTavish township 434
Peach Uranium Mines Limited 157
Pecors Lake East, Gaiashk township 58
Pecors Lake West, Joubin township 90
Peerless Uranium Mining Corporation Limited occurrence, Bolger township 178
Pennebec Mining Corporation occurrence, Porter township 395
Pennwood Gold Mines Limited occurrence, Slater township 217
Perch Lake occurrence, District of Kenora 247
Peturrson Lake occurrence, Tustin township 278

Phillips, R.B. occurrence, Greenwood township 64

Pic Bamoos Prospecting Syndicate occurrence, District of Thunder Bay 420

Piche township 124,125

Pick Uranium Mines Limited occurrence, Shakespeare township 400

Pickle Crow Uranium Mines Limited occurrence, Pardo township 299

Picton Uranium Mines Limited occurrence, Maclennan township 339

Pineneedle Lake occurrence, District of Kenora 290

Pineroad occurrence, District of Kenora 249

Pirson, J.D. occurrence, District of Kenora 248

Pistol Lake occurrence, Timmermans township 169

Pitchgoma Mines Limited 14

Pitchore Uranium Mines Limited occurrence, Tupper township 171

Pitt township 229,231

Plum Urnaium and Metal Mines Limited occurrence, Baldwin township 315

Plum Uranium Mines Limited 311

Pollock, A. 367

Port Arthur occurrence, McIntyre township 432

Porter township 345,347,349,351,394,395,396

Port Monroe occurrence, McCoy township 431

Poulin township 126

Preston East Dome Mines Limited 35,81,131

Primrock Mining and Exploration Limited 151

Projex Limited 351

Pronto Mine, Long township 109

Prosco Limited occurrenc, Vogt township 301

Provencher, M.A. occurrence, Shakleton township 232

Punkari, A. occurrence, Laberge township 430

Quebec Mattagami Mines Limited 335
Quebec Uranium Mines Limited 214
Quibell occurrence, Wabigoon township 298
Quirke Group West occurrence, Beage township 18
Quirke Mine No.1, Bouck township 33
Quirke Mine No.2, Bouck township 35

Raimbault township 208,209,210
Rainy Lake Mining Company Limited 304
Rainy River District 303,304
Rand Reef Mines Limited 301
Ranger Lake Uranium Mining Company Occurrence, Reilly township 128
Ranrouyn Mines Limited occurrence, Smilsky township 149
Ranson 121
Ranwick Uranium Mining Limited occurrence, Peever township 121
Rawhide Uranium Mining Limited occurrence, Viel township 176
Reactor Uranium Mines Limited 347,349
Reilly township 128
Reserve Lake occurrence, Jarvis township 186
Rhodes Exploration 343
Richore Gold Mines Limited occurrence, Hyman township 333,335,337
Rio Algom Limited occurrence -Beange township 18,19
  - Bolger township 24
  - Bouck township 35,32,38
  - Buckles township 42,44
  - Gunterman township 65,72,74,77
  - Joubin township 90,94
  - Long township 109
  - Spragge township 153
  - Timmermans township 169
Rio Tinto Canadian Exploration Limited occurrence, Aberdeen township 10
Rio Tinto Canadian Exploration Limited 21 , 2 2,67,206,317,439

Rix township 130,211,212
Robb-Murmac Uranium Mines Limited occurrence, Slater township 146
Roberts Lake occurrence, Roberts township 355
Roberts township 353,355
Robertson, D.S. and Associates 188,315
Roche, F.D. occurrence, Rix township 21
Roche Long Lac Limited Prospect, Buckles township 47
Rollins township 213
Roman Island occurrence, Buckles township 49
Roots township 131
Russian Lake occurrence, Monestine township 205

Sagamore Explorations Limited 321
Sagard township 132,134,136,214
St. Mary's Uranium Mines Limited occurrence, Joubin township 94
Salter township 215
Sandy Stone Exploration and Development Company Limited occurrences
  - Charron Lake Group occurrence, District of Thunder Bay 415
  - Kassigimini Lake Group occurrence, District of Thunder Bay 416
Sapphire Petroleums 160,162
Satellite Metal Mines Limited occurrence, Shakespeare township 401
Sauve and Inch occurrence, Tudhope township 452
Savage, W.S. 444
Saville, T. 136
Schlesinger, H. occurrence, Shakespeare township 402
Scott and Chandler 24
Seabrook Lake occurrence, Maeck township 202
Seagram township 397

Shakespeare township 357,359,361,363,398,399,400,401,402
Shakespeare Uranium Mines Limited 363
Shackleton township 232
Shedden township 137
Shunck, R. occurrence Salter township 215
Sigasco Explorations Limited 238
Silver Belle Mines Limited 100
Silvermaque Mine, Gilles Limit
Silvermaque Mining Limited occurrence, Gunterman township 80
Silver Men Mines Limited 134,214
Skaphe Group, The 149
Skiming, T. 254
Slater township 139,141,142,143,145,146,148,216,217
Smilsky township 149,150,151,218
Smith, D.E. occurrence, Pic township 436
Snook Lake occurrence, District of Kenora 251
Soderstrom and Hammerstrom occurrence, Sagard township 214
Soo-Tomic Uranium Mines Limited occurrence, Giles township 62
Soo-Tomic Uranium Mines Limited occurrnece, Slater township 170
Sowerby occurrence, Day township 179
Soweska River occurrence, Habel township 228
Spanish American Mines Limited 65
Spanish American Mine, Bouck township 38
Span-North Mining Claims Limited occurrence, Beange township 19
Spencer, W. occurrence, Hudson township 448
Spragge Creek occurrence, Spragge township 153
Springer, C. 305
Squaw Lake occurrence, District of Thunder Bay 421

Stancan Uranium Mines Limited 170
Stancan Mine, Joubin township 92
Stanrock Mine, Buckles township 51
Stencill, V. Occurrence, Harrow township 384
Stephen , C.S. 263
Stetham township 365,403
Stobie township 367
Stobie township occurrence, Stobie township 367
Strain township 219
Strathcona township 300
Striker township 220
Sturdy Mines Limited 414
Sugar Lake occurrence, Victoria township 406
Superior Northwest Incorporated 190
Surluga, T. occurrence, McMurray township 203,204
Sutherland, W.D. occurrence, Morin township 207
Sydney Lake occurrence, District of Kenora 292

Tarbutt Mines occurrence, Tarbutt township 221
Technical Mines Consultants 42,44,65,85,88,155
Teck Corporation Company Limited 96
Temple township 274
Tessier, J. and Williamson, E. occurrence, Hele township 428
Texmont Mines Limited 414
Thessalon township 222
Thorncrest Explroation Limited occurrence, Gunterman township 185
Timmermans township 160 , 161,162,164,165,167,169,170,223,224,225
154,155,157,159
Tomrose Mines Limited 339,387
Tooker, E.O. occurrence, Labonte township 196

Tourist Lake Prospect, District of Kenora	254
Towle, G. and Humpage, J. occurrence, Victoria township	407
Treelined Lake occurrence, District of Kenora	254
Tudhope township	452
Tupper township	171
Turner township	369,404,405
Tustin Mines Limited	297
Tustin township	276,278,297
TX Resources Limited	318,353
United Cobalt Mines Limited occurrence, Baldwin township	372
United MacFie	321
Univex Exploration and Development Corporation Limited occurrence - District of Thunder Bay	422
Urangesellschaft Canada Limtied	234
Van Lake Prospecting Syndicate occurrence, Peever township	123
Vankoughnet township	173
Vankoughnet township occurrence, Vankoughnet township	173
Vermilion Lake occurrence, District of Kenora	255
Viceroy Uranium Corporation Limited occurrence, MacNicol township	296
Victoria township	406,407
Viel township	174,175, 176,226
Vogt township	301

Wabigoon township 279
Wadge Mines Limited occurrence, Porter township 396
Wahl, G. 243,413
Wakefield Uranium Mines Limited 206
Wakman, W.J. and Grinnicke, R. 214
Walsh township 437,438
Watts, Griffith, and McQuade Limited 349
Webb Prospect, Lefroy township 199
Westfield, P. 38
Weston and Company Incoporated 125
Weston, D. occurrence, Viel township 226
Whiskey Prospect, Gaiashk township 60
Whitman township 227
Wilson, A.L. occurrence, Bridges township 294
Wolf Island occurrence, District of Kenora 256

Yost occurrence, Boston township 455
Yzerdraat, W. occurrence, District of Thunder Bay

Zenmac Metal Mines Limited occurrence, Raimbault township 210
Zenmac Metal Mines Limited occurrence, Timmermans township 170